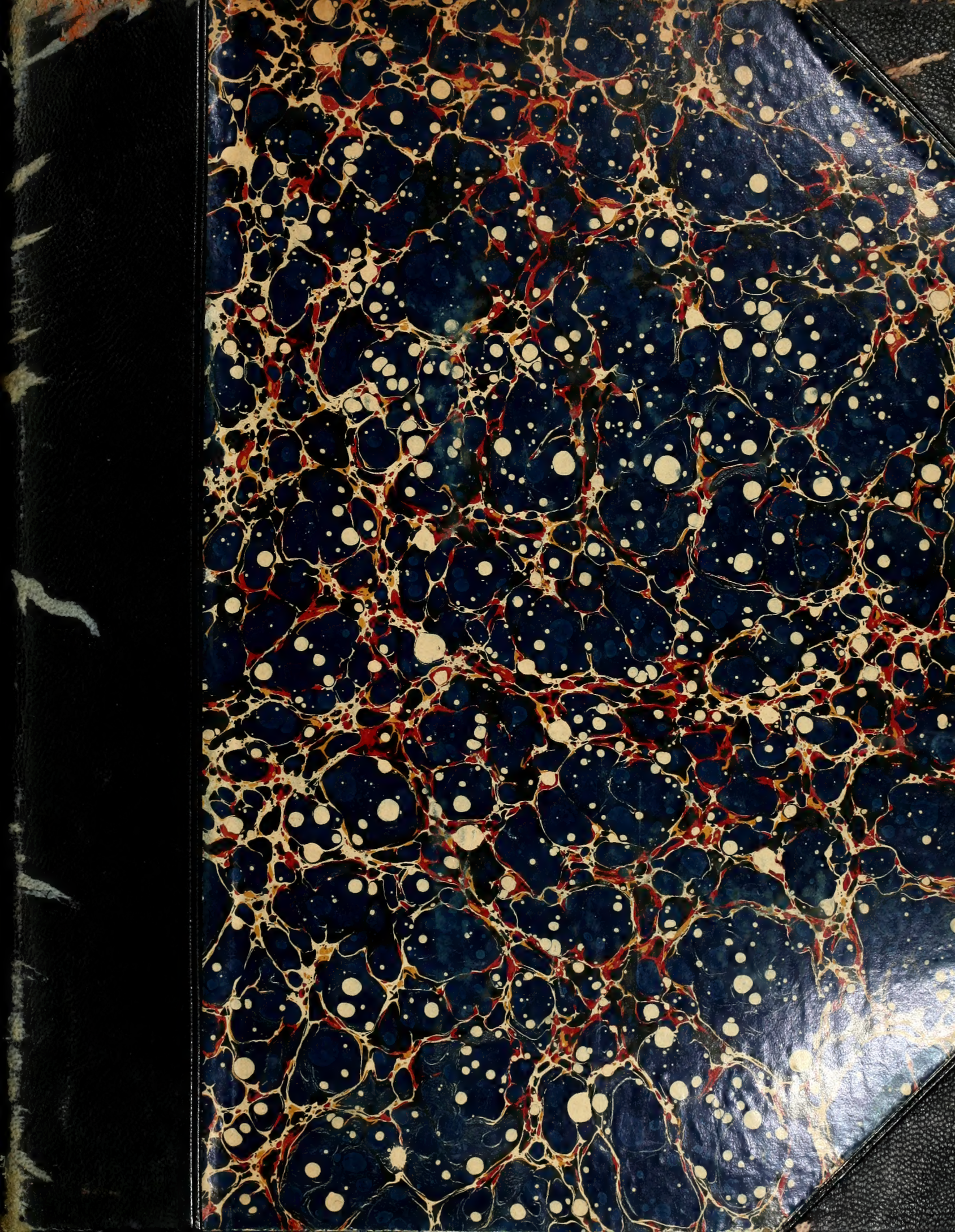

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RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

1861.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1861.)

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS.

1861.

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ROYAL OBSERVATORY, GREENWICH.

INDICATIONS

OF

MAGNETOMETERS.

1861.

The establishment of Assistants in the Magnetical and Meteorological Department of the Royal Observatory consisted during the year 1861, of Mr. James Glaisher, the Superintendant, and Mr. Thomas Downs; with three supernumerary assistants, to aid in the observations and reductions.

For description of the three Magnetometers, the method of observing by the Telescope, and the method of reducing the observations, the reader is referred to the *Greenwich Magnetical and Meteorological Observations* for 1847, Introduction, page i to xlii; and to corresponding parts of the preceding volumes.

During the year 1861, Telescope-Observations of the Magnetometers have usually been made four times every day, except on Sundays, on which days two or three observations only have been taken; but, though these observations are employed in forming the base-lines on the Photographic sheets, their immediate results are not necessarily given in the following pages.

Observations were made of the Horizontal Circle of the Theodolite by which the DECLINATION MAGNET is observed, corresponding to the Astronomical Meridian, on January 8, February 6, March 4, April 20, May 13, 18, July 3, 31, August 10, September 20, November 6, 27, December 11, 23, and 24; and the constancy of its readings was checked by the observations of a fixed mark on many other days.

Observations were made of the Collimation of the DECLINATION MAGNETOMETER; of the Torsion-force of its Suspension skein; and of the Collimation of the Theodolite-Telescope; on 1860, December 28, 29, and 31.

Observations of the Angle of Torsion of the HORIZONTAL FORCE MAGNETOMETER were made on 1861, January 2, 4, and again on July 13 and 17, after the restoration of the brass suspension, which gave way on June 22. The angles determined were 43°. 46′ and 44°. 7′ respectively.

Observations were made for the times of vibration and readings of the scale for different readings of the torsion-circle on the same days; and the general conclusion was, that the scale-readings and the times of vibration had nearly the same value, when the reading of the torsion-circle was 142°. 30′ (marked end West), and 230°. 20′ (marked end East) on January 2 and 4; from July 12 these values were 142°. 30′ and 230° 30′ respectively. The reading adopted for the adjustment of the torsion-circle throughout the year (marked end West) was 142°. 30′.

The numbers used for the variation of horizontal force for a disturbance through one division of the scale, in parts of the whole horizontal force, are 0·0020051 till June 21; and 0·0019808 from July 12 to the end of the year.

The correction for temperature is $0{\cdot}0000809 \times (t-32) + 0{\cdot}000000762 \times (t-32)^2$, where t is the temperature in degrees of Fahrenheit's scale. This formula, which represents the mean of the results deduced from temperature-experiments made with each end of the magnet alternately near the measuring apparatus, is preferable to that given in the volumes before 1850, which were based on experiments made in one position of the magnet. The correction for temperature is *not* applied to any of the results of observations.

Observations of the times of vibration of the VERTICAL FORCE MAGNETOMETER have usually been made three or four times a week. The adopted time of vibration for the year was $15^{s}{\cdot}6$.

Observations for the time of vibration in a horizontal plane were made in 1859, April 19, when the time of vibration was found to be $24^{s}\cdot258$ from 700 vibrations.

The value of the disturbing force, in terms of the whole vertical force, for one division of the scale, is inferred to be 0·0015275 : and this number has been used throughout the year.

The correction for temperature is $0\cdot00013845 \times (t-32) + 0\cdot000004054 \times (t-32)^2$. This formula, like that for the Horizontal Force Magnetometer, is deduced from temperature-experiments made in both positions of the magnet. The correction is *not* applied to any of the results of observation.

The methods adopted in the use of the Photographic Apparatus ; in the determination of zeros, both for time and for magnetic indications; and in the translation into numbers of the indications given by the Photographic Traces for arbitrary times ; are in every respect the same as those described in the Addendum to the Introduction to the *Greenwich Magnetical and Meteorological Observations*, 1847, pages lxxxiii to xc. The only important alterations that have been made are, that (as mentioned at the end of that Introduction) coal-gas charged with the vapour of coal-naphtha is used to give the light required for forming the Photographic Trace ; and that the cylinders carrying the Photographic paper (both that which receives the traces of the Declination Magnet and the Horizontal Force Magnet, and that which receives the traces of the Vertical Force Magnet and the Barometer), are now made to revolve in 24^{h}. It may be mentioned also that, commencing with the year 1858, the observations are referred to Greenwich Mean Time instead of Göttingen Mean Time as heretofore.

It is proper to add, that, in measuring the ordinates of the Vertical Force Curves, the same difficulty that is mentioned in preceding volumes has still occasionally been felt. Apparently without cause, the curve is dislocated; one part being raised above or depressed below the contiguous part, in the direction of the ordinate, usually by small quantities. In all cases the displacement is accompanied by vibration, the original position being at the extremity of the arc of vibration, and the new position being at its center; showing that there has been no want of delicacy in the movement, and that the change is precisely the same as would be caused by the quiet application of a small weight upon one end of the magnet.

In general the ordinates of the Photographic Curves have been measured so frequently, including all maxima and minima, that a reader, laying down a succession of points by means of the given times as abscissæ and the given measures of force as ordinates, connecting these points by straight lines, and attending to the symbols as explained in the foot-notes, will very nearly produce the original curves.

At the times when the Vertical Force Trace is dislocated, two ordinates have been taken for the same abscissa ; these are connected by a brace, and the difference of the numbers indicates the amount of the disturbance.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 1		Jan. 1		Jan. 1		Jan. 1		
h m	° ′ ″	h m		h m		h m	°	°
1. 0	21. 14. 18*		(†)		(†)	1. 0	48 ·3	49 ·2
3. 0	11. 53*	0. 38	·0999	0. 37	·02041	3. 0	49 ·0	50 ·0
9. 0	10. 22*	2. 17	·0997	2. 15	·01962	9. 0	47 ·3	48 ·0
21. 10	11. 51*		***		·01910	21. 10	38 ·2	39 ·6
		3. 40	·0991	2. 45	·01953			
		4. 33	·0996	8. 13:	·01952			
			***	12. 50	·02111			
		7. 0	·1005	18. 7	·02501			
		7. 14	·1014	21. 42	·02872			
		7. 26	·1012	23. 59	·03081			
		7. 34	·1008					
		7. 37	·1011					
		7. 50	·1011					
		8. 8	·1009					
			***					
		10. 7	·1004					
		11. 6	·1010					
		11. 45	·1008					
			***					
		13. 24	·1013					
			***					
		14. 33	·1012					
			***					
		16. 45	·1021					
			***					
		18. 3	·1018					
		19. 4	·1020					
			***					
		21. 30	·1013					
			(†)					
Jan. 2				Jan. 2		Jan. 2		
1. 0	21. 14. 46*			0. 0	·03081	0. 0		39 ·6
3. 0	12. 16*			0. 50	·03097	1. 0		40 ·0
9. 0	7. 47*				·03036	3. 0		42 ·3
21. 0	12. 56*			3. 7	·02945	6. 0	41 ·6	42 ·0
				7. 43:	·02693	9. 0	40 ·0	42 ·0
				10. 15	·02758	12. 0	39 ·7	41 ·6
				16. 37	·03034	18. 0	33 ·8	35 ·5
				19. 34	·03031	21. 0	34 ·0	35 ·8
				23. 59	·02862			
Jan. 3		Jan. 3		Jan. 3		Jan. 3		
0. 0	21. 13. 5		(†)	0. 0	·02862	0. 0	40 ·0	38 ·5
	***	0. 13	·1059	1. 0:	·02813	1. 0	40 ·6	38 ·7
2. 0	10. 15		***	9. 18:	·02102	3. 0	43 ·0	42 ·2
	***	1. 20	·1062	14. 26	·02280	9. 0	41 ·0	41 ·6
4. 10	10. 10		***	17. 27	·02433	21. 15	32 ·3	34 ·4
5. 0:	10. 30	3. 47	·1051	22. 32	·02859			
6. 15	9. 0		***	23. 59	·02913			
9. 50	8. 25	9. 10	·1069					
10. 48	9. 0		***					
11. 14	7. 0	10. 46	·1072					
11. 52	9. 0	11. 14	·1082					
14. 0	9. 50	11. 18	·1078					
14. 21	12. 25	11. 26	·1081					
15. 10	9. 0	11. 52	·1074					
	***		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 3		Jan. 3				Jan. 4		
h m	° ′ ″	h m		h m		h m	°	°
19. 0	21. 11. 30	13. 2	·1080			0. 0	39 ·0	37 ·0
20. 8	12. 0	13. 17	·1079			6. 26	39 ·2	38 ·7
	***		***			11. 45	40 ·6	40 ·4
23. 0	15. 40	15. 52	·1094			19. 16	39 ·0	40 ·5
	(†)		***			22. 35		
		20. 8	·1091			23. 59		
			***					
		21. 48	·1081					
			(†)					
Jan. 4		Jan. 4				Jan. 4		
	(†)		(†)			0. 0	42 ·2	42 ·2
1. 50	21. 17. 20	1. 46	·0986			2. 42:	44 ·0	43 ·0
	***		***			4. 42	42 ·2	41 ·9
2. 25	15. 20	6. 0	·0977			8. 45:	32 ·0	34 ·0
3. 0	15. 30		***			14. 47		
3. 45	17. 0	8. 14	·0980			23. 7		
4. 40	17. 45	8. 26	·0987			23. 59		
5. 0	16. 30	8. 32	·0976					
	***	8. 50	·0982					
7. 5	16. 0		***					
8. 10	14. 0	11. 0	·0982					
8. 30	14. 0	11. 17	·0978					
9. 3	10. 20		***					
9. 15	12. 0	14. 15	·0987					
9. 30	10. 0		***					
	***	15. 13	·0984					
10. 10	9. 0	15. 36	·0990					
	***	16. 33	·0994					
11. 0	12. 15	17. 7	·0992					
11. 45	12. 0	17. 40	·0996					
12. 1	14. 30		***					
12. 20	12. 0	20. 36	·0987					
	***		***					
15. 5	13. 0	22. 38	·0970					
15. 28	14. 30		(†)					
	***							
17. 50	12. 0							
21. 25	15. 50							
	(†)							
Jan. 5		Jan. 5				Jan. 5		
	(†)		(†)			0. 0	42 ·2	42 ·2
1. 0	21. 15. 37*	1. 0	·0968*			2. 42:	44 ·0	43 ·0
3. 0	10. 30	1. 47	·0970			4. 42	42 ·2	41 ·9
4. 0	11. 0		***			8. 45:	32 ·0	34 ·0
8. 0:	10. 0	2. 50	·0966			14. 47		
12. 0	10. 20		***			23. 7		
21. 30	11. 30	3. 15	·0970			23. 59		
	***	3. 36	·0967					
21. 50	10. 30	5. 16	·0971					
	***	6. 3	·0967					
23. 22	11. 0		***					
23. 59	13. 0	8. 46	·0979					
			***					
		10. 10	·0982					
			***					
		15. 16	·1000					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

On January 2 the Horizontal Force Magnet was under adjustment.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	° ′ ″	Jan. 5 h m	
		18. 52	·1007 ***
		21. 30	·1004
		21. 38	·1007
		21. 46	·1003 ***
		23. 32	·1011
		23. 59	·1002
Jan. 6		Jan. 6	
0. 0	21. 13. 0	0. 0	·1002 ***
0. 45	13. 40		
2. 43	10. 15	0. 16	·0997
3. 45	11. 0	0. 40	·1009 ***
4. 17	10. 0		
4. 41	12. 25	1. 2	·1003 ***
5. 14	10. 0		
5. 30	14. 0 ***	1. 30	·1004
		1. 33	·1008
5. 49	14. 0	1. 46	·0997 ***
6. 6	23. 10		
6. 21	10. 0	2. 22	·0999
6. 46	4. 0	2. 35	·0996
7. 9	12. 0 ***	2. 47	·1000 ***
7. 33	12. 0	4. 0	·1001
7. 50	15. 0	4. 7	·1008
8. 4	15. 0	4. 26	·1000 ***
8. 22	12. 40		
8. 31	14. 30	4. 40	·1001
9. 0	12. 0	4. 43	·1012
9. 15	12. 0	4. 46	·1000
10. 8	11. 10	5. 10	·1031
10. 50	13. 0 ***	5. 16	·1028
		5. 32	·1006
11. 29	11. 40	5. 46	·0973
11. 41	9. 45	5. 50	·0983
12. 30	9. 35	6. 10	·0951 ***
14. 0	12. 30		
14. 15	11. 30	6. 18	·0947
15. 7	12. 25	6. 50	·0991
15. 30	11. 20 ***	7. 3	·0976
		7. 15	·0977
16. 35	14. 20 ***	7. 18	·0975
		7. 32	·0983
17. 45	11. 0 ***	7. 52	·0987
		8. 8	·0978
21. 24	11. 30 ***	8. 17	·0987 ***
23. 8	14. 0	8. 50	·0976
23. 25	13. 10	9. 30	·0986 ***
23. 59	14. 15		
		9. 32	·0980
		9. 46	·0985 ***
		10. 26	·0988
		10. 45	·0984
		10. 59	·0987

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m		°	°
Jan. 6			
0. 0	·02832	35 ·4	37 ·0
0. 42	·02852	30 ·0	31 ·8
3. 50	·02611 ***		
5. 46	·02543		
6. 40	·02614 ***		
11. 45	·02560		
18. 17	·02921		
23. 30	·02757		
23. 59	·02716		

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	° ′ ″	Jan. 6 h m	
		11. 7	·0984 ***
		11. 50	·0996 ***
		12. 46	·0991 ***
		16. 15	·0997 ***
		16. 46	·1000 ***
		17. 45	·0997 ***
		21. 43	·0996 ***
		22. 50	·0981 ***
		23. 13	·0986 ***
		23. 50	·0979
		23. 59	·0980
Jan. 7		Jan. 7	
0. 0	21. 14. 15	0. 0	·0980 ***
1. 0	14. 30		
2. 30:	11. 35	0. 46	·0982
3. 25	11. 40	0. 50	·0977
7. 38	10. 5	1. 7	·0985
8. 0	9. 10	1. 16	·0981 ***
8. 30	10. 35 ***		
		2. 40	·0978
11. 2	11. 50 ***	3. 14	·0978
		3. 30	·0975
11. 46	10. 0 ***	4. 2	·0975
		4. 20	·0976 ***
13. 45	11. 0		
14. 15	9. 30	5. 26	·0972 ***
15. 45:	11. 30		
16. 40	10. 20 ***	6. 15	·0975 ***
21. 30	13. 0	6. 46	·0972 ***
23. 7	16. 0		
23. 28	14. 45	9. 26	·0982
23. 59	17. 0	10. 3	·0979 ***
		11. 0	·0984
		11. 15	·0980 ***
		12. 2	·0986
		12. 7	·0983
		12. 32	·0989
		13. 7	·0984 ***
		17. 20	·0997 ***
		19. 46	·0996
		20. 58	·0995
		21. 23	·0997 ***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m		°	°
Jan. 7			
0. 0	·02716	34 ·0	35 ·0
2. 9	·02456	37 ·1	37 ·6
12. 52:	·01751	39 ·0	39 ·0
23. 7	·02320	31 ·6	33 ·2
23. 59	·02372		

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 7		
1. 0	34 ·0	35 ·0
3. 0	37 ·1	37 ·6
9. 0	39 ·0	39 ·0
21. 0	31 ·6	33 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Jan. 7 h m		h m		h m	°	°
		23. 17	·0974					
		23. 32	·0977 (†)					
Jan. 8		Jan. 8		Jan. 8		Jan. 8		
0. 0	21. 17. 0 ***		(†)	0. 0	·02372	1. 0	35 ·4	36 ·0
		1. 0	·0978*	2. 45	·02291	3. 0	39 ·0	40 ·0
4. 0:	11. 0	1. 42	·0975 ***	5. 27:	·01810	9. 30	38 ·0	39 ·5
8. 0:	9. 0			9. 9	·01665	21. 0	29 ·0	31 ·6
13. 0	11. 25 ***	3. 30	·0972	12. 45	·01770			
		5. 4	·0969 ***	22. 56	·02467			
20. 45	13. 0 ***			23. 59	·02436			
		6. 50	·0975 ***					
21. 55	11. 30							
23. 0	16. 0 ***	8. 46	·0986					
		10. 47	·0990					
23. 59	16. 30	11. 20	·0989					
		11. 45	·0992					
		12. 36	·0991					
		12. 46	·0992					
		13. 16	·0992 ***					
		17. 45	·1005 ***					
		18. 52	·1010 ***					
		20. 46	·1000 ***					
		21. 47	·0999 ***					
		22. 55	·0988 ***					
		23. 59	·0996					
Jan. 9		Jan. 9		Jan. 9		Jan. 9		
0. 0	21. 16. 30 ***	0. 0	·0996 ***	0. 0	·02436	0. 0	32 ·0	33 ·6
				1. 47:	·02361	1. 0	33 ·7	35 ·0
1. 10	16. 10	1. 58	·0980	4. 40	·01882	3. 0	37 ·8	38 ·7
2. 30:	12. 0	2. 18	·0980	8. 2	·01617	6. 0	40 ·5	41 ·8
6. 40	9. 0	2. 46	·0975 ***	8. 16	·01636	9. 0	39 ·8	40 ·2
9. 0	9. 10 ***			13. 18	·01745	12. 0	38 ·4	38 ·5
		5. 7	·0982 ***	16. 40	·01924	18. 0	29 ·6	31 ·5
10. 45	7. 0			22. 45	·02382	21. 0	29 ·8	31 ·7
12. 5	9. 55 ***	6. 30	·0972 ***	23. 59	·02431			
14. 54	13. 50	9. 16	·0974 ***					
15. 15	11. 30 ***							
		10. 26	·0981 ***					
17. 55	10. 0 ***							
		10. 50	·0975					
21. 6	9. 30 ***	11. 38	·0978 ***					
23. 45	15. 0 (†)	12. 52	·0990 ***					
		15. 13	·1001					
		15. 32	·1006 ***					
		16. 10	·1003					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Jan. 9 h m		h m		h m	°	°
		18. 26	·1012 ***					
		20. 56	·1003					
		21. 5	·1007 ***					
		22. 8	·0991					
		22. 29	·0991					
		22. 47	·0988					
		23. 59	·0987					
Jan. 10		Jan. 10		Jan. 10		Jan. 10		
	(†)	0. 0	·0987 ***	0. 0	·02431	0. 0	32 ·0	33 ·8
0. 40	21. 15. 0 ***			0. 16	·02432	1. 0	32 ·2	33 ·3
		0. 43	·0992		(†)	3. 0	34 ·7	35 ·4
1. 25	14. 0	0. 52	·0997	1. 0	·02414*	9. 0	34 ·7	35 ·8
2. 6	14. 0	1. 16	·0990	1. 33	·02396	21. 0	29 ·3	31 ·0
3. 35:	10. 30	3. 45	·0990	3. 10	·02395			
8. 37:	9. 0	4. 7	·0986 ***	9. 36:	·02054			
12. 30	10. 40 ***			15. 35	·02240			
		10. 7	·1002 ***	22. 20	·02652			
17. 40	11. 25			23. 59	·02630			
18. 23	10. 0	12. 33	·1009					
21. 50	12. 0	14. 43	·1008					
23. 0	15. 20	16. 46	·1017					
23. 59	15. 30	18. 40	·1017					
		19. 16	·1014					
		19. 46	·1015					
		20. 45	·1007					
		21. 11	·1007					
		22. 18	·0996 ***					
		23. 50	·0990					
		23. 59	·0992					
Jan. 11		Jan. 11		Jan. 11		Jan. 11		
0. 0	21. 15. 30	0. 0	·0992	0. 0	·02630	1. 0	33 ·0	35 ·0
0. 50	14. 25	0. 45	·0962	6. 10:	·01961	3. 0	37 ·8	38 ·8
3. 40:	10. 0	1. 7	·0968 ***	8. 13	·01843	9. 0	40 ·0	39 ·3
5. 7:	11. 0			12. 15	·01752 ***	21. 0	38 ·3	39 ·8
9. 2	8. 0	2. 17	·0964					
13. 20	9. 0 ***	4 13	·0964	17. 37	·01721 ***			
		4. 36	·0967					
15. 0	10. 20	4. 45	·0963	22. 48	·01857			
15. 30	14. 0	5. 10	·0962	23. 59	·01836			
16. 0	4. 50 ***	5. 50	·0967 ***					
16. 58	8. 30	7. 7	·0970 ***					
17. 7	7. 0							
17. 13	9. 35 ***	8. 36	·0962 ***					
17. 58	6. 10 ***	10. 45	·0964 ***					
19. 2	9. 0 ***	14. 10	·0976 ***					
20. 57	8. 30	14. 50	·0973					
22. 0	10. 0	15. 30	·0989 ***					
22. 16	11. 0							
22. 30	9. 10	16. 5	·0980 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Jan. 11	
h m	° ′ ″
23. 22	21. 13. 50
23. 41	12. 10
23. 59	13. 10
Jan. 12	
0. 0	21. 13. 10
0. 36	13. 55
0. 53	12. 0
1. 25	14. 10
1. 45	13. 0
	***
3. 40:	11. 0
5. 7	14. 0
6. 13	10. 0
	***
8. 38	9. 0
8. 44	10. 40
9. 6	8. 35
	***
11. 46	7. 30
12. 13	14. 5
13. 14	4. 50
	***
14. 52	11. 40
15. 16	9. 30
15. 25	10. 25
15. 51	8. 30
16. 14	10. 50
17. 3	9. 15
	***
19. 45	8. 50
	***
22. 30	12. 30
22. 55	11. 0
23. 25	14. 0
23. 49	12. 15
23. 59	13. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 11	
h m	
18. 33	·0990
	***
19. 34	·0972
19. 45	·0978
19. 50	·0972
20. 4	·0980
	***
20. 26	·0970
20. 43	·0976
	***
21. 47	·0966
22. 0	·0956
	***
22. 47	·0961
23. 7	·0956
	***
23. 59	·0960
Jan. 12	
0. 0	·0960
0. 37	·0961
0. 46	·0959
1. 14	·0961
	***
1. 43	·0959
	***
2. 18:	·0962
	***
3. 2	·0951
	***
3. 37	·0959
	***
4. 46	·0963
5. 20	·0959
	***
6. 40	·0968
	***
7. 52	·0967
8. 7	·0971
8. 26	·0966
8. 43	·0969
8. 50	·0962
	***
10. 36	·0971
10. 56	·0964
11. 20	·0967
11. 42	·0963
12. 0	·0972
12. 11	·0966
12. 32	·0975
13. 5	·0950
	***
14. 6	·0963
	***
15. 32	·0972
	***
18. 22	·0973
19. 10	·0976
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 12	
0. 0	·01836
2. 15	·01735
3. 27	·01813
9. 20	·01841
13. 17	·01912
23. 59	·02193

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	
Jan. 12		
1. 0	41 ·0	41 ·2
3. 0	43 ·3	43 ·7
9. 0	42 ·7	43 ·3
22. 45	39 ·0	40 ·5

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Jan. 13	
0. 0	21. 13. 0
0. 50	17. 0
	***
2. 8	9. 30
2. 45	14. 0
2. 50	14. 10
3. 45:	10. 0
6. 45	8. 0
7. 10	6. 30
7. 15	7. 0
7. 28	6. 0
7. 50	6. 0
8. 30:	9. 10
10. 15	9. 40
10. 45	8. 55
13. 50	8. 30
14. 15	10. 30
14. 30	8. 35
14. 55	10. 40
15. 30	7. 30
15. 38	7. 50
15. 50	6. 30
16. 30	8. 30
	***
18. 40	12. 0
19. 0	11. 50
19. 50	12. 50
20. 40	11. 0
21. 12	13. 30
21. 45	11. 0
22. 5	14. 50
22. 28	13. 0
22. 45	13. 0
23. 5	12. 30
23. 28	13. 0
	(†)
Jan. 14	
0. 0	21. 11. 30
0. 15	11. 0
1. 10	13. 0
1. 40	10. 30
1. 55	13. 40
2. 37	9. 20
	***
3. 55	10. 0
5. 0	11. 30
5. 15	11. 0
5. 35	5. 0
5. 54	8. 0
6. 40	9. 30
8. 30	8. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 12	
h m	
22. 50	·0961
23. 20	·0964
	***
23. 59	·0955
Jan. 13	
0. 0	·0955
0. 7	·0955
0. 29	·0950
0. 53	·0956
1. 20	·0941
1. 55	·0941
2. 31	·0952
3. 6	·0941
5. 13	·0953
	***
7. 32	·0949
7. 54	·0956
14. 13	·0971
14. 26	·0975
15. 24	·0970
16. 45	·0987
17. 12	·0976
18. 9	·0983
19. 46	·0975
21. 10	·0956
23. 22	·0960
	(†)
Jan. 14	
	(†)
0. 40	·0958
1. 10	·0955
1. 22	·0959
1. 58	·0942
2. 16	·0951
	***
3. 17	·0956
	***
4. 40	·0950
4. 54	·0951
5. 15	·0961
5. 40:	·0956
6. 0	·0960

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 13	
0. 0	·02193
2. 2	·02184
10. 7:	·01836
22. 20	·02471
23. 59	·02470
Jan. 14	
0. 0	·02470
1. 42	·02421
8. 37:	·02057
13. 6	·02192
22. 15	·02606
23. 59	·02672

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	
Jan. 13		
10. 23	43 ·0	43 ·0
21. 0	36 ·7	37 ·2
Jan. 14		
1. 0	39 ·5	39 ·6
3. 0	41 ·9	41 ·2
9. 0	40 ·7	40 ·2
21. 0	35 ·0	36 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 14		Jan. 14						
h m	° ′ ″	h m		h m		h m	°	°
9. 22	21. 10. 15	6. 10	·0958					
9. 46	5. 35	6. 22	·0961					
9. 54	21. 6. 15	7. 16	·0961					
10. 7	20. 58. 30	7. 22	·0958					
10. 35	21. 8. 10	7. 52	·0964					
10. 47	7. 0		(†)					
11. 10	9. 10	9. 0	·0966*					
	***	9. 40	·0979					
14. 7	10. 0	9. 46	·0988					
	***	10. 16	·0967					
16. 0	9. 15	10. 30	·0967					
16. 51	7. 30	10. 43	·0972					
23. 0	15. 0	11. 40	·0972					
23. 30	13. 15	12. 17	·0975					
23. 59	13. 30		***					
		14. 3	·0972					
			***					
		14. 42	·0977					
		14. 50	·0975					
		15. 15	·0977					
		15. 46	·0978					
		17. 16	·0984					
			***					
		18. 59	·0980					
			***					
		20. 45	·0979					
			***					
		22. 15	·0964					
		22. 57	·0959					
		23. 18	·0963					
			(†)					
Jan. 15		Jan. 15		Jan. 15		Jan. 15		
	(†)	1. 0	·0957	0. 0	·02672	1. 0	38 ·0	38 ·0
0. 30	21. 13. 0	3. 0	·0957*	1. 37	·02635	3. 0	40 ·0	39 ·4
1. 10	13. 30	9. 30	·0973*	7. 25:	·02311	9. 30	38 ·2	39 ·3
1. 40	12. 0	21. 13	·0968*	11. 12	·02370	21. 13	32 ·0	33 ·9
2. 5	12. 35			13. 50	·02442			
2. 50	11. 30			16. 38	·02610			
3. 13	9. 40			23. 4	·02921			
4. 7	11. 0			23. 59	·02931			
4. 35	9. 0							
5. 0	8. 15							
5. 36	10. 0							
8. 25	8. 35							
12. 10	8. 30							
12. 44	10. 0							
14. 51	10. 10							
15. 20	8. 30							
15. 52	10. 50							
16. 30	9. 15							
17. 30	11. 0							
20. 45	10. 15							
23. 59	14. 30							
Jan. 16		Jan. 16		Jan. 16		Jan. 16		
0. 0	21. 14. 30		(†)	0. 0	·02931	0. 0	34 ·0	35 ·0
0. 50	14. 0	1. 0	·0965	1. 42	·02852	1. 0	35 ·7	36 ·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 16		Jan. 16		Jan. 16		Jan. 16		
h m	° ′ ″	h m		h m		h m	°	°
3. 30	21. 9. 30	1. 28	·0967	6. 46:	·02257	3. 0	39 ·0	39 ·7
6. 10:	9. 0	3. 32	·0961	11. 22	·01979	6. 0	41 ·1	40 ·8
10. 30	6. 10	4. 36	·0959	16. 21	·01918	9. 0	41 ·8	41 ·0
11. 15	7. 15		***	23. 59	·02021	12. 0	42 ·8	42 ·0
12. 42	6. 30	8. 18	·0957			18. 0	40 ·5	40 ·7
12. 50	8. 0	9. 36	·0954			21. 0	40 ·7	41 ·0
13. 1	7. 0		***					
14. 15	8. 20	12. 48	·0958					
	***	13. 15	·0967					
20. 15	9. 10		***					
23. 59	14. 0	14. 2	·0961					
			***					
		18. 30	·0971					
			***					
		20. 8	·0970					
		22. 13	·0957					
		22. 45	·0956					
		23. 3	·0960					
		23. 59	·0956					
Jan. 17		Jan. 17		Jan. 17		Jan. 17		
0. 0	21. 14. 0	0. 0	·0956	0. 0	·02021	0. 0	41 ·6	42 ·7
0. 57	11. 30	0. 7	·0956	1. 57	·01932	1. 0	42 ·8	43 ·6
1. 30	13. 0	0. 30	·0963		·02011	3. 0	45 ·7	45 ·3
3. 6	9. 50	0. 46	·0960	11. 6	·01982	9. 0	45 ·5	45 ·0
6. 10	9. 15	0. 52	·0952	13. 50	·02056	21. 0	40 ·2	41 ·0
6. 39	7. 0	1. 36	·0955	22. 43	·02419			
7. 15	9. 0	2. 27	·0950	23. 59	·02407			
	***	5. 36	·0958					
11. 45	8. 10		***					
13. 0	8. 40	6. 28	·0952					
13. 36	13. 0	6. 52	·0960					
14. 30:	8. 40		***					
15. 15	10. 15	14. 20	·0970					
15. 55	9. 5		***					
17. 35:	9. 50	16. 16	·0977					
21. 0	8. 30	18. 26	·0979					
23. 59	13. 5	19. 46	·0978					
			***					
		22. 33	·0952					
			***					
		23. 59	·0948					
Jan. 18		Jan. 18		Jan. 18		Jan. 18		
0. 0	21. 13. 5	0. 0	·0948	0. 0	·02407	1. 0	43 ·0	44 ·6
	***		***	1. 50	·02286	3. 0	46 ·0	46 ·3
2. 40	12. 0	0. 50	·0947	5. 32	·01955	9. 0	47 ·0	48 ·0
4. 44	7. 35	1. 28	·0949	5. 46	·01996	21. 0	41 ·0	41 ·8
5. 45	10. 30	2. 16	·0942	11. 36	·02003			
6. 6	9. 20	2. 46	·0942		·02062			
9. 45	7. 30	3. 17	·0948	22. 20	·02557			
11. 20	8. 0		***	23. 59	·02456			
12. 27	7. 30	4. 22	·0942					
13. 0	5. 30		***					
15. 23	9. 35	6. 50	·0950					
15. 46	8. 10	7. 32	·0959					
16. 27	10. 0		***					
17. 5	7. 30	10. 43	·0962					
	***							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 18		Jan. 18						
h m	° ′ ″	h m		h m		h m	°	°
19. 25	21. 11. 0	11. 16	·0970					
20. 30	10. 30	11. 40	·0966					
21. 41	13. 0	12. 20	·0971					
			***					
23. 10	13. 30							
23. 26	15. 30	13. 52	·0967					
			***					
23. 59	15. 30							
		15. 40	·0969					
			***					
		17. 6	·0978					
		19. 28	·0975					
		20. 18	·0970					
		21. 46	·0951					
			***					
		23. 0	·0948					
			***					
		23. 59	·0950					
Jan. 19		Jan. 19		Jan. 19		Jan. 19		
0. 0	21. 15. 40	0. 0	·0950	0. 0	·02456	1. 0	43 ·3	43 ·7
1. 20	16. 0	1. 26	·0948	0. 33	·02442	3. 0	45 ·2	45 ·1
1. 42	14. 20	1. 40	·0950		(†)	9. 0	44 ·7	44 ·0
2. 0	15. 10	1. 58	·0944	1. 0	·02492*	22. 15	42 ·2	43 ·0
3. 30	10. 40	2. 36	·0950	2. 27	·02461			
6. 0:	10. 40	3. 15	·0945	8. 0:	·02192			
8. 30	9. 10	3. 58	·0949	14. 12	·02401			
11. 30	8. 0	4. 40	·0946	21. 30	·02613			
16. 0	9. 55		***	23. 59	·02636			
	***	5. 46	·0954					
20. 0	8. 15	6. 7	·0951					
21. 40	11. 20		***					
22. 15	10. 5	8. 15	·0962					
	***		***					
23. 59	13. 10	11. 28	·0967					
			***					
		12. 6	·0965					
		12. 22	·0970					
		12. 36	·0965					
		15. 10	·0974					
		18. 7:	·0980					
		22. 2	·0961					
		23. 18	·0966					
		23. 50	·0961					
		23. 59	·0958					
Jan. 20		Jan. 20		Jan. 20		Jan. 20		
0. 0	21. 13. 10	0. 0	·0958	0. 0	·02636	9. 55	45 ·6	46 ·8
0. 41	17. 0	0. 44	·0963	1. 27	·02622	21. 0	44 ·7	45 ·3
0. 47	15. 30	0. 47	·0956		***			
0. 52	16. 10	0. 50	·0960	6. 8	·02356			
1. 0	14. 0	1. 2	·0950	10. 29	·02255			
1. 30	14. 0		***	21. 10	·02433			
1. 45	12. 0	1. 20	·0946	22. 55	·02502			
1. 53	14. 25	1. 36	·0951	23. 59	·02456			
2. 1	13. 0	1. 46	·0945					
2. 14	14. 35	2. 17	·0962					
3. 15	12. 10		***					
	***	3. 15	·0957					
4. 6	14. 0	3. 34	·0961					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 20		Jan. 20						
h m	° ′ ″	h m		h m		h m	°	°
4. 20	21. 13. 10	3 45	·0966					
4. 45	14. 0	3. 52	·0965					
5. 5	12. 10	4. 15	·0956					
5. 18	13. 0	4. 20	·0960					
6. 15	10. 0	4. 33	·0955					
6. 45	11. 0	4. 46	·0958					
	***	5. 6	·0954					
9. 15	7. 0	5. 47	·0961					
9. 40	7. 40	6. 2	·0955					
10. 10	7. 10	6. 8	·0961					
10. 55:	5. 0		***					
11. 40	8. 0	6. 32	·0963					
12. 30	8. 0		***					
13. 3	5. 25	7. 33	·0943					
13. 32	9. 15		***					
14. 39	9. 40	9. 0	·0961					
15. 6	12. 20		***					
16. 0	7. 0	10. 33	·0966					
16. 36	9. 0	10. 47	·0960					
	***		***					
18. 5	8. 40	11. 8	·0960					
	***	11. 45	·0967					
19. 50	10. 0		***					
20. 10	12. 35	12. 50	·0960					
	***	13. 7	·0964					
22. 10	11. 20		***					
	***	13. 28	·0960					
23. 59	16. 30		***					
		15. 46	·0974					
		16. 18	·0967					
		16. 40	·0970					
			***					
		18. 45	·0972					
		19. 36	·0967					
		19. 45	·0956					
		20. 4	·0958					
		20. 15	·0951					
			***					
		21. 13	·0955					
			***					
		22. 36	·0934					
			***					
		23. 33	·0930					
		23. 59	·0941					
Jan. 21				Jan. 21		Jan. 21		
0. 0	21. 16. 40	0. 0	·0941	0. 0	·02456	1. 0	48 ·0	48 ·0
	***	0. 17	·0942	1. 37	·02382	3. 0	49 ·7	50 ·0
1. 55	15. 30		(†)	2. 20	·02391	9. 0	45 ·8	47 ·5
2. 47	14. 50	1. 0	·0932*	7. 27:	·02012	21. 0	38 ·4	40 ·0
5. 5	8. 35	1. 52	·0932	14. 3	·02515			
	***		***	19. 46	·03018			
7. 15:	11. 0	3. 27	·0945	23. 59	·02859			
	***	3. 42	·0943					
9. 52	4. 0	4. 25	·0952					
9. 59	4. 55		***					
10. 5	4. 0	5. 11	·0949					
10. 40	10. 0	6. 20	·0961					
	***		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 21		Jan. 21						
h m	° ′ ″	h m		h m		h m	°	°
15. 30	21. 11. 10	8. 31	·0967					
16. 15	10. 30	9. 20	·0963					
	***	9. 51	·0970					
19. 36	10. 0	10. 12	·0984					
22. 6	13. 0	10. 17	·0978					
22. 31	12. 25	10. 26	·0983					
23. 0	14. 30	10. 58	·0970					
23. 40	13. 30	11. 16	·0977					
23. 59	16. 0		***					
		14. 0	·0979					
			***					
		15. 49	·0976					
			***					
		18. 56	·0977					
			***					
		20. 47	·0973					
		21. 4	·0964					
		21. 27	·0961					
		21. 45	·0955					
		22. 6	·0960					
		22. 20	·0957					
		22. 45	·0960					
			***					
		23. 35	·0952					
		23. 48	·0959					
		23. 59	·0954					
Jan. 22		Jan. 22		Jan. 22		Jan. 22		
0. 2	21. 17. 0	0. 0	·0954	0. 0	·02859	1. 0 41 ·3	41 ·8	
0. 45	13. 50	0. 8	·0955	3. 41	·02623	3. 0 44 ·0	45 ·0	
	***	0. 16	·0948	6. 30	·02421	9. 0 45 ·6	45 ·1	
			***	6. 49	·02501	21. 0 41 ·6	42 ·2	
2. 35	15. 0							
2. 50	13. 10	0. 57	·0946	7. 10	·02762			
3. 10:	14. 10		***	7. 26	·02505			
	***	1. 56	·0952		***			
4. 15:	9. 40	2. 10	·0949	8. 17	·02436			
5. 15	14. 0	2. 35	·0956	8. 40	·02477			
	***	2. 46	·0947		***			
6. 5	7. 30	3. 15	·0954	12. 33	·02409			
6. 16	12. 0	3. 46	·0936		***			
6. 37	8. 0	4. 59	·0959	13. 17	·02328			
6. 53	21. 9. 25	5. 20	·0950		***			
7. 12	20. 29. 10	5. 36	·0967	16. 36	·02477			
7. 40	21. 11. 10	5. 45	·0961		***			
7. 51	20. 55. 0	6. 0	·0994	22. 13	·02691			
8. 15	21. 9. 40	6. 11	·0997	23. 59	·02700			
8. 36	1. 0	6. 33	·0925					
8. 55	8. 45	6. 45	·0936					
9. 33	11. 40	6. 49	·0922					
9. 53	8. 10	7. 6	·0961					
10. 0	9. 30	7. 10	·0946					
10. 26	4. 30	7. 20	·0980					
	***	7. 44	·0915					
11. 3	10. 15	8. 0	·0950					
11. 32	7. 30	8. 17	·0928					
11. 56	10. 0	8. 30	·0934					
12. 3	13. 15	8. 43	·0946					
12. 17	10. 50	8. 48	·0934					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 22		Jan. 22						
h m	° ′ ″	h m		h m		h m	°	°
12. 40	21. 14. 0	9. 3	·0939					
12. 55	8. 0	9. 12	·0930					
	***	9. 18	·0937					
14. 0	12. 0		***					
	***	9. 43	·0930					
14. 30	10. 5	9. 48	·0936					
15. 0	11. 10	10. 3	·0926					
15. 10	9. 50	10. 25	·0941					
	***	10. 36	·0939					
18. 28	10. 30	10. 45	·0935					
18. 32	5. 35	10. 56	·0937					
18. 44	12. 10	11. 8	·0932					
18. 50	7. 10	11. 30	·0921					
	***	11. 45	·0927					
19. 30	21. 9. 30	12. 17	·0915					
19. 42	20. 55. 0		***					
20. 7	21. 14. 30	13. 36	·0944					
	***		***					
21. 20	12. 0	14. 22	·0936					
	***		***					
23. 59	13. 30	14. 47	·0944					
			***					
		15. 20	·0940					
			***					
		17. 16	·0954					
			***					
		18. 37	·0953					
		18. 45	·0941					
		18. 50	·0961					
		18. 58	·0942					
		19. 7	·0954					
			***					
		19. 50	·0948					
		20. 2	·0965					
			***					
		20. 35	·0927					
		20. 41	·0938					
			***					
		22. 30	·0917					
			***					
		23. 4	·0930					
		23. 59	·0916					
Jan. 23		Jan. 23		Jan. 23		Jan. 23		
0. 0	21. 13. 30	0. 0	·0916	0. 0	·02700	0. 0	43 ·0	43 ·2
	***	0. 46	·0920	1. 48	·02631	1. 0	43 ·7	45 ·0
1. 15	13. 25	0. 51	·0925	4. 7	·02492	3. 0	45 ·8	45 ·7
1. 45	17. 30	1. 17	·0914	4. 36	·02491	6. 0	45 ·8	46 ·6
2. 15	16. 0	1. 33	·0915	5. 41	·02398	9. 0	44 ·9	45 ·3
2. 54	18. 30	1. 48	·0908	7. 50	·02307	12. 0	44 ·5	45 ·0
4. 0	15. 0	2. 32	·0926	9. 32	·02285	18. 0	41 ·0	42 ·0
4. 40	7. 0		***		***	21. 0	40 ·5	42 ·5
4. 55	7. 40	3. 47	·0934	10. 34	·02252			
5. 21	12. 15	4. 5	·0930	13. 47	·02371			
7. 7	8. 30	4. 18	·0921	14. 31	·02337			
7. 35	10. 30	4. 55	·0947	16. 22	·02399			
7. 51	9. 0	6. 4	·0943		***			
8. 6	9. 10	6. 47	·0946	22. 30	·02748			
8. 30	6. 0	7. 6	·0954		***			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 23		Jan. 23		Jan. 23				
h m	° ′ ″	h m		h m		h m	°	°
8. 53	21. 7. 0	7. 47	·0945	23. 59	·02756			
9. 14	0. 30		***					
9. 37	21. 2. 0	8. 36	·0958					
9. 45	20. 59. 0	8. 47	·0951					
10. 3	21. 6. 30	9. 20	·0982					
10. 25	1. 0	9. 33	·0972					
10. 33	21. 1. 30	9. 50	·0978					
10. 58	20. 57. 0	10. 18	·0957					
11. 16	21. 3. 10	10. 27	·0959					
11. 53	4. 15	10. 50	·0943					
	***	11. 7	·0952					
12. 40	21. 1. 0	11. 22	·0943					
13 40	20. 57. 0	11. 47	·0952					
14. 0	21. 10. 50	12. 20	·0947					
14. 10	10. 50	12. 42	·0937					
14. 32	8. 15	13. 14	·0941					
14. 55	9. 50	13. 52:	·0960					
15. 5	13. 0	14. 20	·0943					
	***	14. 46	·0948					
16. 6	13. 15	15. 0	·0944					
16. 30	9. 25	15. 20	·0957					
17. 0	11. 0		***					
17. 55	10. 30	16. 47:	·0950					
18. 10	12. 30	17. 50	·0961					
18. 22	11. 15	18. 6	·0953					
	***	19. 7	·0961					
18. 45	12. 30		***					
18. 55	15. 0	19. 40	·0954					
	***		***					
19. 53	9. 0	20. 17	·0957					
20. 15	9. 30	20. 36	·0949					
20. 30	11. 25		***					
	***	21. 43	·0944					
21. 45	9. 30	22. 0	·0890					
22. 7	18. 30	22. 19	·0864					
22. 15	16. 10	22. 56	·0918					
22. 40	22. 0	23. 7	·0902					
22. 52	18. 0	23. 45	·0938					
23. 5	23. 30	23. 59	·0937					
23. 33	16. 0							
23. 55	23. 0							
23. 58	21. 0							
Jan. 24		Jan. 24		Jan. 24		Jan. 24		
	(†)	0. 0	·0937	0. 0	·02756	0. 0	43 ·0	43 ·4
0. 10	21. 19. 50	0. 18	·0934	0. 38	·02712	1. 0	44 ·0	44 ·3
0. 35	29. 0	0. 33	·0944	1. 20	·02738	3. 0	47 ·0	46 ·5
0. 55	16. 30	0. 47	·0913		***	9. 32	47 ·2	47 ·0
1. 15	22. 0	0. 56	·0894	5. 6	·02472	21. 0	46 ·6	47 ·3
1. 45	28. 0	1. 3	·0916	5. 42	·02476			
	***	1. 7	·0892	6. 13	·02433			
2. 20	28. 10	1. 18	·0915	6. 35	·02477			
3. 0	17. 20	1. 42	·0929	6. 38	·02710			
	***	2. 11	·0883	6. 45	·02281			
3. 42	18. 30	2. 18	·0906	6. 49	·02409			
3. 52	17. 0	2. 36	·0920	6. 53	·02351			
4. 1	19. 0	2. 47	·0908	7. 5	·02411			
4. 30	11. 40	3. 6	·0924	7. 10	·02313			
					***			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 24		Jan. 24		Jan. 24				
h m	° ′ ″	h m		h m		h m	°	°
4. 51	21. 14. 0	3. 10	·0913	7. 36	·02320			
5. 6	11. 0	3. 17	·0924	7. 43	·02418			
5. 25	22. 0		***		***			
5. 40	10. 5	3. 36	·0920	8. 12	·02310			
5. 46	12. 55	3. 46	·0929	8. 37	·02451			
6. 6	3. 15	4. 5	·0924		***			
6. 35	22. 0	4. 11	·0911	10. 12	·02263			
6. 50	2. 0		***	10. 46	·02261			
7. 0	21. 25. 5	4. 48	·0930	11. 48	·02192			
7. 9	20. 53. 0	4. 56	·0939		***			
7. 18	21. 1. 0	5. 8	·0925	12. 15	·02068			
7. 30	20. 41. 10	5. 26	·0941		***			
7. 55	21. 0. 0	5. 40	·0911	13. 10	·02171			
	***	5. 47	·0930	13. 33	·02102			
8. 35	10. 30		***		***			
8. 43	8. 0	6. 5	·0935	15. 50	·02250			
9. 0	21. 11. 20	6. 14	·0914		***			
9. 14	20. 50. 15		***	19. 28	·02211			
9. 30	57. 15	6. 27	·0910		***			
9. 36	20. 56. 0	6. 36	·0862	23. 59	·02250			
9. 50	21. 1. 25	7. 0	·0964					
	***	7. 10	·0894					
10. 16	20. 58. 10	7. 18	·0925					
10. 45	20. 52. 0	7. 27	·0892					
11. 15	21. 2. 5	7. 42	·0906					
	***	7. 50	·0901					
12. 0	21. 13. 0	8. 5	·0874					
12. 46	20. 53. 10	8. 30	·0919					
13. 7	21. 19. 0		***					
13. 18	14. 0	8. 42	·0913					
13. 31	16. 55	8. 50	·0925					
13. 52	6. 0	8. 58	·0932					
14. 0	7. 30	9. 10	·0905					
14. 30	4. 0	9. 20	·0930					
14. 45	8. 0		***					
15. 3	6. 30	10. 3	·0899					
15. 30	9. 0	10. 17	·0919					
15. 46	14. 0	10. 30	·0915					
16. 13	6. 35	10. 56	·0928					
16. 45	6. 30	11. 18	·0905					
17. 7	12. 0		***					
17. 15	9. 0	11. 45	·0913					
17. 22	12. 0	11. 59	·0883					
17. 39	12. 0	12. 8	·0899					
17. 55	14. 40	12. 17	·0893					
18. 8	11. 15	12. 35	·0907					
	***	12. 47	·0926					
19. 6	12. 5	13. 0	·0966					
19. 23	9. 30	13. 12	·0905					
19. 30	10. 15	13. 27	·0913					
19. 44	8. 0	13. 33	0898					
20. 0	10. 25	13. 58	·0927					
20. 27	13. 0		***					
20. 43	10. 0	14. 25	·0912					
21. 5	13. 35	14. 32	·0913					
21. 50	9. 30	14. 43	·0921					
	***	15. 0	·0917					
22. 20	18. 0	15. 15	·0928					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Jan. 24	
h m	° ′ ″
22. 40	21. 17. 0
23. 7	21. 0
	***
23. 59	18. 10
Jan. 25	
0. 0	21. 18. 30
	***
0. 36	18. 30
1. 0	22. 25
1. 22	18. 40
1. 35	23. 30
1. 45	20. 15
1. 55	22. 30
2. 10	19. 30
2. 17	24. 30
2. 44	17. 30
2. 52	19. 30
	**
3. 15	15. 25
3. 25	15. 0
3. 31	17. 0
3. 45	17. 55
4. 5	21. 22. 30
4. 25	20. 49. 0
4. 31	51. 15
4. 39	20. 47. 20
4. 55	21. 3. 0
5. 0	1. 10
5. 10	10. 0
5. 17	5. 30
5. 28	8. 35
5. 40	2. 30
5. 54	11. 30
6. 0	9. 10
6. 10	12. 0
6. 14	8. 30
6. 18	22. 30
6. 25	13. 0
6. 32	21. 22. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 24	
h m	
15. 27	·0920
15. 36	·0932
15. 47	·0918
	***
17. 5	·0912
17. 16	·0923
17. 47	·0928
18. 0	·0923
18. 47	·0941
	***
19. 36	·0925
19. 47	·0930
	***
20. 36	·0917
20. 47	·0928
	***
21. 40	·0900
21. 47	·0911
	***
23. 40	·0912
23. 44	·0921
23. 59	·0903
Jan. 25	
0. 0	·0903
	***
1. 6	·0927
1. 21	·0912
1. 35	·0921
1. 43	·0910
1. 56	·0918
2. 4	·0912
2. 15	·0938
2. 26	·0921
2. 35	·0938
2. 46	·0915
	***
3. 17	·0923
3. 22	·0914
	***
3. 47	·0925
4. 17	·0893
4. 36	·0962
4. 47	·0970
5. 6	·0935
5. 13	·0926
5. 30	·0913
5. 45	·0942
5. 50	·0930
6. 7	·0937
6. 15	·0962
6. 19	·0932
6. 25	·0945
6. 31	·0878
6. 50	·0921
6. 57	·0910
7. 6	·0919
7. 17	·0899

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 25	
0. 0	·02250
1. 7	·02269
	***
4. 15	·02071
4. 37	·02130
5. 18	·01931
5. 46	·01936
	***
6. 48	·01876
8. 40	·01902
8. 51	·01843
9. 22	·01887
9. 40	·01772
10. 2	·01839
10. 39	·01863
	***
12. 17	·01740
	***
14. 46	·01823
15. 45	·01796
16. 20	·01668
	***
17. 58	·01751
19. 15	·01762
	***
23. 2	·02028
23. 59	·02031

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 25		
1. 0	50 ·0	50 ·5
3. 0	52 ·3	52 ·0
9. 0	53 ·1	52 ·5
21. 0	50 ·3	51 ·8

Greenwich Mean Solar Time.	Western Declination.
Jan. 25	
h m	° ′ ″
6. 41	20. 53. 10
6. 55	21. 2. 5
7. 10	6. 20
7. 25	3. 0
7. 31	9. 15
7. 46	9. 30
7. 55	7. 30
8. 6	9. 0
8. 15	5. 0
8. 39	4. 30
8. 49	15. 0
9. 4	3. 0
9. 21	8. 0
9. 30	28. 5
9. 50	4. 10
9. 55	6. 0
10. 8	1. 10
	***
10. 40	1. 0
10. 58	21. 5. 0
11. 13	20. 57. 0
11. 45	21. 6. 0
11. 55	4. 0
12. 1	6. 10
12. 15	0. 0
12. 30	4. 30
	***
13. 7	5. 5
13. 22	21. 7. 30
	***
14. 10	20. 59. 0
14. 45	21. 14. 30
14. 55	9. 30
15. 24	1. 0
15. 47	25. 0
16. 25	5. 35
16. 45	11. 0
	***
17. 53	17. 0
18. 30	19. 10
18. 50	15. 40
19. 40	13. 35
20. 10	20. 0
20. 25	18. 0
20. 30	20. 5
20. 47	14. 35
	***
21. 38	9. 35
21. 55	10. 30
22. 30	16. 35
	***
23. 59	19. 30
Jan. 26	
0. 0	21. 19. 30
0. 13	21. 5
0. 15	19. 0
0. 25	22. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 25	
h m	
7. 25	·0908
	***
8. 30	·0905
8. 42	·0925
8. 57	·0889
9. 8	·0899
9. 27	·0937
9. 36	·0883
9. 52	·0908
10. 2	·0896
10. 50	·0924
11. 7	·0901
11. 26	·0925
11. 41	·0916
12. 0	·0942
12. 15	·0926
12. 27	·0941
	***
13. 34	·0918
14. 12	·0947
14. 35	·0935
	**
15. 10	·0945
15. 37	·0934
15. 45	·0916
15. 50	·0927
16. 12	·0922
16. 38	·0943
16. 45	·0929
16. 56	·0938
17. 11	·0933
	***
17. 45	·0937
	***
18. 45	·0928
19. 5	·0915
19. 34	·0910
	***
20. 8	·0925
	***
21. 40	·0902
	***
22. 17	·0923
	***
23. 0	·0912
	(†)
Jan. 26	
	(†)
0. 7	·0905
0. 15	·0911
0. 24	·0893

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 26	
0. 0	·02031
0. 47	·02118
	***
2. 10	·02050

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 26		
1. 0	51 ·8	53 ·7
3. 0	54 ·8	55 ·3
9. 0	53 ·0	53 ·8
22. 25	48 ·0	49 ·5

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Jan. 26		Jan. 26		Jan. 26		h m	°	°
h m	° ′ ″	h m		h m				
0. 35	21. 17. 35	0. 45	·0915	2. 45	·02072			
0. 58	16. 30	0. 56	·0916	3. 26	·01933			
	***		***		***			
1. 55	22. 0	1. 45	·0898	6. 0	·01841			
2. 13	13. 20	2. 7	·0866		***			
2. 18	11. 30	2. 10	·0873	6. 33	·01862			
2. 27	14. 30	2. 14	·0858	7. 2:	·01941			
2. 30	12. 30	2. 17	·0872	7. 13	·02080			
2. 39	17. 0	2. 26	·0865		***			
2. 45	11. 5	2. 31	·0883	8. 16	·01797			
2. 53	20. 15	2. 40	·0871	8. 23	·01908			
3. 5	12. 0	2. 46	·0921		***			
3. 20	21. 0	3. 0	·0895	9. 0	·02049			
	***	3. 11	·0937		***			
4. 30	15. 0		***	9. 40	·01988			
	***	3. 45	·0921	9. 56	·02000			
6. 0	13. 0	4. 10	·0936	10. 3	·01900			
	***	4. 17	·0921		***			
6. 52	21. 13. 25	4. 30	·0936	10. 40	·01808			
7. 6	20. 54. 35	4. 38	·0925	10. 45	·01842			
7. 16	49. 10		***	10. 49	·01736			
7. 30	20. 36. 10	5. 5	·0940	11. 8	·01950			
7. 55	21. 7. 0		***		***			
8. 10	20. 45. 5	5. 56	·0942	12. 0	·01961			
8. 15	50. 0	6. 7	·0921	12. 17	·02060			
8. 20	20. 48. 0	6. 18	·0943	12. 56	·02032			
9. 0	21. 1. 30	6. 26	·0927	13. 35	·01923			
9. 28	3. 0		***	14. 50	·02180			
9. 40	0. 15	6. 47	·0928	16. 40	·02310			
9. 46	8. 30	6. 58	·0911	17. 18	·02277			
9. 55	3. 10	7. 7	·0943	18. 7	·02178			
10. 0	9. 30	7. 36	·0886	20. 55	·02263			
10. 13	2. 0	7. 47	·0916	23. 59	·02532			
10. 30	21. 4. 30	8. 6	·0857					
10. 54	20. 37. 0	8. 10	·0880					
11. 15	50. 0	8. 15	·0862					
11. 30	48. 0		***					
12. 15	53. 0	9. 20	·0892					
12. 19	20. 51. 15		***					
12. 45	21. 3. 5	9. 40	·0880					
13. 5	1. 10	9. 47	·0888					
13. 25	14. 5	10. 4	·0871					
13. 45	1. 10	10. 6	·0894					
14. 15	13. 35	10. 17	·0875					
14. 24	12. 30	10. 27	·0896					
14. 33	9. 0	10. 42	·0880					
	***	10. 48	·0910					
15. 55	8. 25	10. 53	·0867					
	***	11. 15	·0946					
17. 14	11. 30		***					
17. 50	32. 30	11. 48	·0910					
18. 15	32. 0	12. 6	·0885					
18. 36	23. 15	12. 25	·0904					
18. 55	26. 0	12. 34	·0885					
19. 7	23. 10	13. 6	·0898					
19. 15	24. 15	13. 10	·0884					
19. 54	15. 30	13. 20	·0921					
20. 14	21. 0	13. 27	·0912					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Jan. 26		Jan. 26						
h m	° ′ ″	h m		h m		h m	°	°
20. 45	21. 14. 35	13. 45	·0928					
21. 10	15. 30	14. 12	·0896					
21. 36	14. 0	14. 36	·0914					
22. 2	19. 0	15. 9	·0923					
22. 16	19. 30		***					
22. 40	23. 10	16. 0	·0917					
22. 50	23. 0	16. 21	·0928					
23. 30	16. 0		***					
23. 45	18. 30	17. 5	·0921					
23. 59	17. 0	17. 20	·0899					
			***					
		18. 13	·0922					
		18. 18	·0930					
		18. 27	·0923					
		18. 46	·0936					
			***					
		21. 28	·0901					
		21. 46	·0904					
		22. 4	·0893					
			***					
		22. 36	·0893					
		22. 47	·0881					
		23. 27	·0895					
		23. 40	·0891					
		23. 59	·0897					
Jan. 27		Jan. 27		Jan. 27		Jan. 27		
0. 0	21. 17. 0	0. 0	·0897	0. 0	·02532	6. 11	52 ·0	53 ·0
0. 17	16. 0	0. 22	·0921	0. 38	·02610	21. 0	48 ·0	48 ·6
0. 35	18. 30		***	2. 32	·02687			
	***	0. 56	·0910		***			
1. 32	16. 0		***	7. 3	·02510			
1. 46	14. 25	1. 45	·0912		***			
1. 58	17. 0	1. 50	·0920	10. 25	·02463			
2. 23	12. 10	2. 8	·0909	13. 35	·02572			
2. 40	14. 30	2. 30	·0919	18. 16	·02671			
	***	3. 0	·0903	23. 59	·02863			
3. 30	12. 25	3. 20	·0901					
3. 50	9. 0		***					
	***	4. 45	·0929					
4. 45	8. 15	5. 3	·0911					
5. 1	0. 0	5. 12	·0927					
5. 50	10. 0	5. 21	·0935					
6. 7	8. 10		***					
6. 25	10. 0	5. 52	·0925					
6. 54	8. 0		***					
7. 6	9. 0	6. 47	·0929					
7. 31	7. 50	7. 7	·0922					
7. 47	21. 3. 30		***					
8. 14	20. 43. 20	7. 46	·0923					
9. 8	21. 5. 0	7. 52	·0905					
9. 32	6. 35	8. 20	·0928					
9. 42	3. 0		***					
9. 49	4. 30	9. 18	·0925					
9. 55	3. 0	9. 40	·0944					
	***	9. 45	·0938					
10. 50	6. 0		***					
12. 55	10. 55	10. 42	·0932					
	***		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 27		Jan. 27						
h m	° ′ ″	h m		h m		h m	°	°
13. 40	21. 9. 30	13. 20	·0938					
	***		***					
16. 30	10. 55	15. 0	·0937					
	***		***					
20. 5	9. 30	18. 53	·0944					
20. 45	7. 0		***					
	***	21. 7	·0921					
23. 59	14. 30		***					
		22. 6	·0927					
		23. 44	·0919					
		23. 59	·0913					
Jan. 28		Jan. 28		Jan. 28		Jan. 28		
0. 0	21. 14. 30	0. 0	·0913	0. 0	·02863	1. 0	50 ·0	49 ·9
1. 15	14. 35	0. 42	·0918	2. 0	·02886	3. 0	52 ·0	52 ·6
3. 0	14. 0	0. 55	·0922		***	9. 0	50 ·0	50 ·3
	***	1. 16	·0913	6. 8	·02422	21. 0	39 ·7	42 ·6
6. 0	9. 30	1. 42	·0919	7. 41	·02310			
6. 45	11. 0		***	11. 46:	·02431			
7. 0	7. 55	3. 25	·0920	14. 15	·02642			
7. 25	10. 0		***	18. 50	·03070			
7. 40	6. 5	3. 56	·0921	23. 17	·02872			
8. 5	9. 30		***		(†)			
8. 31	7. 5	4. 54	·0934					
9. 0	9. 10		***					
	***	5. 46	·0925					
12. 40	11. 0		***					
17. 0	11. 0	6. 37	·0936					
19. 45	9. 40	6. 46	·0925					
21. 30:	7. 30	7. 17	·0940					
22. 50	13. 0	7. 32	·0926					
23. 59	14. 30		***					
		8. 6	·0935					
			***					
		9. 47	·0936					
		11. 16	·0942					
			***					
		15. 3	·0931					
			***					
		19. 40	·0961					
			***					
		23. 16	·0930					
		23. 59	·0926					
Jan. 29		Jan. 29		Jan. 29		Jan. 29		
0. 0	21. 14. 30	0. 0	·0926		(†)	1. 0	43 ·0	45 ·0
1. 40	16. 35	1. 17	·0928	0. 43	·02572	3. 0	47 ·8	48 ·7
2. 10	14. 50	1. 36	·0934	1. 35	·02554	9. 0	49 ·5	51 ·5
5. 34	9. 25	1. 45	·0929	5. 17	·02061	21. 0	41 ·4	43 ·6
6. 16	10. 0		***	11. 36:	·01703			
6. 43	8. 50	3. 20	·0933	20. 47	·02284			
7. 5	9. 30		***	23. 5	·02406			
7. 25	5. 5	4. 35	0929	23. 59	·02449			
7. 30	6. 0	5. 16	·0935					
7. 48	4. 0	5. 27	·0933					
8. 24	7. 40	5. 52	·0938					
9. 13	21. 7. 0	6. 36	·0936					
9. 35	20. 41. 0	7. 0	·0938					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 29		Jan. 29						
h m	° ′ ″	h m		h m		h m	°	°
9. 55	21. 42. 10	7. 10	·0931					
10. 40	20. 59. 10	7. 18	·0945					
	***	7. 33	·0952					
11. 55	21. 7. 0		***					
12. 46	5. 0	8. 36	·0949					
13. 25	13. 0	9. 20	·0932					
14. 17	4. 30	9. 46	·0965					
14. 45	9. 30	10. 5	·0960					
	***	10. 42	·0916					
16. 10	11. 35		***					
	***	12. 33	·0937					
17. 0	10. 0	12. 47	·0930					
17. 34	10. 50	13. 15	·0952					
17. 51	9. 0		***					
18. 5	10. 30	14. 20	·0940					
	***		***					
21. 2	10. 0	15. 7	·0941					
	***		***					
23. 59	16. 50	17. 6	·0952					
		17. 45	·0960					
			***					
		19. 50	·0964					
			***					
		20. 37	·0961					
			***					
		21. 56	·0940					
			***					
		23. 17	·0932					
			***					
		23. 59	·0932					
Jan. 30		Jan. 30		Jan. 30		Jan. 30		
0. 0	21. 17. 0	0. 0	·0932	0. 0	·02449	0. 0	42 ·3	43 ·2
0. 25	19. 30	0. 27	·0937	3. 6	·02391	1. 0	43 ·1	44 ·8
0. 33	17. 0		***	10. 8:	·02153	3. 0	46 ·0	46 ·3
0. 40	19. 0	1. 0	·0926	17. 40	·02231	6. 0	47 ·0	47 ·5
1. 4	13. 10	1. 56	·0937	23. 20	·02320	10. 25	47 ·0	48 ·1
1. 47	14. 50	2. 17	·0935	23. 59	·02300	12. 0	46 ·8	47 ·7
6. 30:	9. 30	4. 36	·0937			18. 0	44 ·4	45 ·3
10. 15	8. 10	6. 35	·0949			21. 0	45 ·0	45 ·7
15. 55:	10. 55		***					
20. 45	8. 15	10. 3	·0949					
22. 35	13. 0		***					
23. 59	16. 0	15. 8	·0956					
			***					
		19. 53	·0961					
			***					
		22. 2	·0937					
			***					
		23. 59	·0922					
Jan. 31		Jan. 31		Jan. 31		Jan. 31		
0. 0	21. 16. 0	0. 0	·0922	0. 0	·02300	0. 0	47 ·6	47 ·3
0. 20	17. 0	0. 12	·0918	1. 17	·02231	1. 0	48 ·4	48 ·6
0. 46	15. 55	0. 26	·0925	3. 20	·01995	3. 0	51 ·2	51 ·2
1. 16	17. 0	0. 55	·0920	6. 13	·01662	9. 0	50 ·0	50 ·4
2. 45	15. 0	1. 26	·0925	9. 6	·01725	21. 0	46 ·0	47 ·6
	***		***	10. 25	·01786			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 31		Jan. 31		Jan. 31		h m	°	°
h m	° ′ ″	h m		h m				
4. 0	21. 12. 5	2. 18	·0921	11. 36	·01791			
4. 23	14. 0	2. 42	·0928	14. 31	·01942			
4. 55	11. 0		***	18. 46	·02150			
5. 16	2. 0	3. 12	·0922	21. 6	·02213			
5. 58	11. 35		***	23. 5	·02208			
6. 39	13. 0	3. 30	·0928		(†)			
8. 45	21. 9. 10		***					
9. 25	20. 54. 0	4. 35	·0899					
9. 55	21. 0. 30		***					
10. 16	4. 30	4. 52	·0903					
10. 33	4. 0	5. 15	·0893					
	***	5. 36	·0910					
11. 40	9. 0	5. 47:	·0905					
	***	6. 7	·0910					
12. 30	10. 0	6. 35	·0922					
13. 10	7. 0		***					
	***	7. 0	·0921					
15. 0	9. 30		***					
15. 27	6. 40	7. 35	·0937					
15. 50	9. 30	7. 38	·0931					
	***	7. 50	·0936					
16. 41	10. 0		***					
17. 25	7. 25	8. 40	·0916					
18. 3	10. 5		(†)					
19. 4	10. 0	9. 0	·0919*					
19. 26	11. 20	9. 36	·0920					
19. 45	9. 0	9. 47	·0916					
19. 53	10. 5		***					
20. 0	9. 0	10. 46	·0923					
20. 15	12. 0	11. 5	·0920					
21. 0	11. 30	11. 46	·0932					
21. 30	9. 0		***					
	***	12. 17	·0931					
22. 40	14. 30	12. 34	·0937					
23. 0	13. 0	12. 56	·0937					
23. 59	16. 0	13. 28	·0951					
		13. 42	·0944					
		13. 50	·0951					
			***					
		15. 0	·0942					
			***					
		16. 43	·0946					
			***					
		17. 35	·0957					
		17. 45	·0949					
		18. 0	·0956					
			***					
		19. 5	·0948					
		19. 26	·0952					
		19. 42	·0944					
		19. 47	·0948					
		19. 58	·0943					
		20. 15	·0946					
			***					
		21. 55	·0930					
			***					
		23. 59	·0927					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 1		Feb. 1		Feb. 1		Feb. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 16. 0	0. 0	·0927			1. 0	50 ·0	50 ·0
	***		***	0. 45	(†)	3. 0	52 ·0	52 ·0
1. 45	16. 30	2. 8	·0921	4. 40	·02140	9. 0	52 ·0	52 ·0
2. 5	15. 20	2. 19	·0925	5. 35	·01742	21. 0	43 ·2	46 ·1
2. 23	16. 55	2. 37	·0914		·01810			
3. 0	15. 0		***	12. 17	***			
	***	3. 30	·0917	13. 35	·01842			
3. 50	12. 0		***	17. 16	·01800			
	***	4. 18	·0930	20. 42	·01998			
5. 10	10. 30	4. 36	·0927	23. 15	·02261			
7. 10	10. 40		***		·02482			
7. 23	9. 10	5. 17	·0936		(†)			
7. 44	10. 35		***					
8. 8	10. 0	7. 26	·0936					
8. 23	3. 35	7. 45	·0939					
8. 38	3. 0		***					
9. 20	5. 0	8. 15	·0938					
9. 42	8. 40	8. 20	·0934					
10. 9	9. 50	8. 35	·0942					
	***	8. 58	·0937					
11. 45	8. 35	9. 20	·0938					
12. 35	10. 0	10. 18	·0936					
12. 55	12. 0	10. 45	·0931					
13. 45	7. 0	11. 50	·0936					
14. 10	9. 30	12. 17	·0945					
	***	12. 35	·0941					
16. 25	10. 20	12. 50	·0950					
16. 55	8. 10	13. 36	·0933					
18. 25	9. 15	14. 17	·0925					
19. 5	12. 0		***					
	***	18. 26	·0944					
21. 23	8. 0	19. 8	·0937					
21. 30	9. 30	19. 54	·0945					
21. 44	8. 0		***					
23. 15	13. 0	21. 4	·0943					
23. 54	15. 20		***					
23. 59	14. 10	22. 25	·0935					
		22. 47	·0927					
		23. 59	·0930					
Feb. 2		Feb. 2		Feb. 2		Feb. 2		
0. 0	21. 14. 0	0. 0	·0930		(†)	1. 0	46 ·5	47 ·0
0. 15	12. 35	0. 27	·0923	1. 0	·02518*	3. 0	48 ·3	49 ·0
0. 45	14. 10		***	1. 13	·02471	9. 0	47 ·8	48 ·2
2. 0	16. 40	2. 11	·0928	3. 27	·02362	22. 0	41 ·0	42 ·7
4. 55	9. 55	3. 40	·0916	9. 26:	·02060			
5. 54	21. 9. 40		***	14. 45	·02250			
6. 23	20. 55. 0	4. 8	·0925	18. 26	·02551			
7. 35	21. 9. 0	4. 17	·0921	23. 59	·02843			
	***		***					
9. 5	6. 0	5. 56	·0936					
9. 30	3. 30	6. 20	·0916					
10. 5	6. 25	6. 35	·0927					
10. 55	7. 0	6. 47	·0935					
11. 30	14. 10	7. 27	·0935					
12. 0	7. 30	7. 50	·0928					
	***	8. 15	·0937					
13. 25	8. 15		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 2		Feb. 2						
h m	° ′ ″	h m		h m		h m	°	°
13. 44	21. 7. 0	9. 5	·0938					
13. 58	7. 20	9. 18	·0930					
14. 16	13. 0	9. 58	·0941					
15. 12	6. 40	10. 15	·0935					
15. 58	9. 10	10. 50	·0942					
	***	11. 2	·0937					
17. 23	7. 35	11. 15	·0944					
	***		***					
21. 44	9. 10	12. 35	·0944					
22. 36	12. 0	13. 6	·0954					
23. 59	13. 30	13. 45	·0943					
		14. 15	·0962					
		14. 37	·0955					
		15. 13	·0954					
		16. 27	·0961					
			***					
		19. 50	·0963					
		21. 26	·0955					
		22. 37	·0940					
		23. 36	·0946					
		23. 59	·0942					
Feb. 3		Feb. 3		Feb. 3		Feb. 3		
0. 0	21. 13. 30	0. 0	·0942	0. 0	·02843	8. 30	45 ·5	46 ·0
0. 23	13. 30	0. 18	·0941	2. 15:	·02842	21. 0	43 ·8	44 ·5
1. 0	15. 10	0. 35	·0943	9. 8	·02573			
1. 58	15. 0	1. 15	·0942	14. 16	·02420			
5. 30	10. 30	3. 42	·0954	22. 45	·02500			
6. 35	10. 55	5. 0	·0956	23. 59	·02494			
8. 46	8. 45	5. 16	·0951					
11. 30	9. 15		***					
	***	6. 15	·0958					
17. 55	9. 30		***					
18. 50	10. 45	11. 36	·0956					
19. 40	9. 5		***					
21. 35	9. 10	14. 35	·0961					
22. 55	14. 0		***					
	***	20. 13	·0960					
23. 59	14. 0		***					
		23. 27	·0937					
		23. 59	·0935					
Feb. 4		Feb. 4		Feb. 4		Feb. 4		
0. 0	21. 14. 0	0. 0	·0935	0. 0	·02494	1. 0	47 ·0	45 ·7
2. 0	14. 0	0. 26	·0934	2. 12	·02391	3. 0	49 ·2	48 ·0
6. 0:	10. 0	1. 26	·0938	5. 40:	·01935	9. 0	49 ·0	50 ·0
7. 10	11. 15		***	7. 50	·01822	21. 0	47 ·0	47 ·4
	***	3. 0	·0929	10. 43	·01810			
7. 53	7. 0	5. 6	·0937	22. 6	·02000			
8. 0	7. 50	5. 47	·0938	23. 59	·02031			
8. 15	6. 20	6. 48	·0943					
8. 53	10. 30		***					
	***	7. 20	·0935					
10. 50	4. 30	7. 45	·0937					
12. 0:	8. 0	7. 55	·0941					
	***	8. 6	·0936					
14. 10	8. 0	8. 27	·0941					
	***		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 4		Feb. 4						
h m	° ′ ″	h m		h m		h m	°	°
17. 50	21. 9. 50	9. 35	·0943					
20. 50	8. 0	10. 8:	·0961					
23. 59	14. 10	10. 42	·0944					
		12. 0	·0953					
			***					
		14. 26	·0953					
			***					
		17. 20	·0956					
		19. 27	·0957					
		20. 46	·0950					
			***					
		21. 49	·0937					
			***					
		22. 28	·0940					
			***					
		23. 59	·0936					
Feb. 5		Feb. 5		Feb. 5		Feb. 5		
0. 0	21. 14. 10	0. 0	·0936	0. 0	·02031	1. 0	49 ·0	49 ·0
	***		***		·02040	3. 0	50 ·0	49 ·3
1. 35	14. 40	2. 7	·0930	1. 47	·02262	9. 0	49 ·8	49 ·7
2. 9	13. 0		***	6. 0	·02063	21. 15	48 ·0	48 ·0
2. 39	13. 0	4. 42	·0936	9. 37	·02061			
3. 5	12. 0	6. 55	·0947	15. 36	·02144			
5. 25	9. 40	8. 16	·0952	18. 47	·02223			
9. 0	9. 55	9. 38	·0952	23. 59	·02250			
15. 0	10. 30		***					
	***	11. 40	·0959					
20. 46	8. 0		***					
23. 30	12. 15	13. 52	·0954					
23. 59	12. 50	16. 40	·0961					
		18. 28	·0963					
		19. 46	·0962					
		20. 17	·0963					
		22. 7	·0946					
			***					
		23. 59	·0937					
Feb. 6		Feb. 6		Feb. 6		Feb. 6		
0. 0	21. 12. 50	0. 0	·0937	0. 0	·02250	0. 0	49 ·4	49 ·2
0. 31	12. 40		***	1. 37	·02231	1. 0	50 ·2	49 ·8
0. 52	14. 10	0. 26	·0937	6. 12	·01976	3. 0	51 ·7	50 ·6
1. 5	13. 30	0. 37	·0931	14. 47	·02010	6. 0	53 ·0	52 ·0
1. 46	15. 30	0. 48	·0934	17. 36	·02122	9. 0	53 ·0	52 ·0
2. 10	13. 10		***	22. 45	·02489	12. 0	52 ·5	51 ·6
2. 30	14. 30	1. 37	·0936	23. 59	·02531	18. 0	47 ·5	47 ·9
2. 50	14. 0	1. 45	·0940			21. 0	48 ·2	48 ·0
3. 51	9. 0	1. 56	·0936					
	***	2. 15	·0937					
5. 45	11. 0	2. 24	·0941					
7. 6	9. 0		***					
9. 25	8. 0	3. 5	·0940					
12. 13	9. 0		***					
12. 36	7. 5	3. 47	·0931					
12. 50	13. 30		***					
	***	4. 48	·0938					
16. 55	10. 5	5. 7	·0938					
	***	5. 15	·0934					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 6		Feb. 6						
h m	° ′ ″	h m		h m		h m	°	°
21. 25:	21. 7. 0	5. 27	·0938					
			***					
22. 2	9. 10							
22. 24	8. 0	8. 4	·0933					
			***					
22. 35	11. 0							
23. 10	11. 50	10. 7	·0934					
23. 45	14. 30	10. 48	·0938					
			***					
23. 59	14. 0							
		11. 50	·0936					
		12. 7	·0939					
		12. 20	·0947					
		12. 46	·0941					
			***					
		14. 30	·0941					
			***					
		18. 36	·0961					
			***					
		19. 50	·0962					
			***					
		21. 47	·0945					
		22. 6	·0948					
		22. 20	·0939					
		22. 45	·0945					
		23. 7	·0939					
		23. 36	·0925					
		23. 59	·0929					
Feb. 7		Feb. 7		Feb. 7		Feb. 7		
0. 0	21. 14. 0	0. 0	·0929	0. 0	·02531	0. 0	48 ·3	48 ·8
	***	0. 35	·0936	1. 5	·02500	1. 0	49 ·8	49 ·7
2. 30	15. 0	0. 45	·0932	2. 27	·02448	3. 0	51 ·8	51 ·5
3. 0	12. 30		***	6. 12	·02062	9. 0	52 ·7	52 ·3
3. 26	13. 30	1. 44	·0937	7. 46	·01953	21. 0	48 ·0	48 ·0
3. 45:	11. 10	2. 18	·0937	8. 7	·01961			
10. 40	9. 0	2. 27	·0939	8. 28	·02020			
11. 15	7. 5		***	14. 20	·02092			
12. 43	10. 0	3. 5	·0932	17. 25	·02173			
	***	3. 18	·0934	23. 59	·02415			
16. 0	12. 0	3. 29	·0937					
17. 11	8. 5	3. 40	·0931					
17. 26	9. 40	4. 8	·0934					
17. 45	8. 5		***					
	***	4. 33	·0932					
21. 25:	6. 30		***					
	***	5. 38	·0941					
23. 10	13. 0		***					
23. 45	11. 5	8. 16	·0945					
23. 59	14. 0		***					
		11. 40	·0951					
		11. 49	·0946					
		12. 17	·0952					
			***					
		13. 32	·0950					
			***					
		18. 5	·0963					
			***					
		19. 15	·0963					
			***					
		22. 33	·0933					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Feb. 7						
h m	° ′ ″	h m		h m		h m	°	°
		22. 50	·0938					
			***					
		23. 59	·0930					
Feb. 8		Feb. 8		Feb. 8		Feb. 8		
0. 0	21. 14. 0	0. 0	·0930	0. 0	·02415	1. 0	50 ·5	50 ·3
	***	0. 8	·0931	2. 6	·02360	3. 0	52 ·2	51 ·9
1. 50	14. 30		***	5. 48	·02049	9. 0	51 ·8	51 ·5
2. 0	13. 30	1. 6	·0927	6. 7	·02049	21. 0	47 ·0	48 ·0
2. 15	15. 20	1. 33	·0930	6. 25	·02122			
2. 30	13. 0	2. 4	·0926	8. 48:	·02088			
4. 10	11. 0	2. 18	·0932	16. 12	·02195			
5. 24	9. 0	2. 35	·0928	23. 7	·02520			
5. 50	11. 0	3. 17	·0931	23. 28	·02498			
	***	4. 18	·0930		(†)			
7. 44	9. 10	4. 45	·0932					
8. 7	6. 40	5. 18	·0923					
9. 15	8. 30	5. 36	·0924					
17. 0	11. 0	5. 45	·0922					
21. 0:	8. 0	7. 15	·0936					
23. 10	12. 20	7. 37	·0935					
23. 59	13. 0	8. 20	·0942					
		8. 36	·0952					
		8. 56	·0947					
		11. 18	·0950					
		13. 3	·0953					
			***					
		17. 45	·0961					
		18. 48	·0962					
		20. 5	·0959					
			***					
		22. 17	·0940					
			***					
		23. 7	·0941					
		23. 59	·0926					
Feb. 9		Feb. 9		Feb. 9		Feb. 9		
0. 0	21. 13. 0	0. 0	·0926		(†)	1. 0	49 ·6	50 ·2
1. 58	15. 20	1. 55	·0941	1. 0	·02488*	3. 0	51 ·0	51 ·6
	***	2. 26	·0940	3. 0	·02418*	9. 0	48 ·2	49 ·8
3. 36	14. 30	3. 15	·0947	5. 0	·02231	22. 31	43 ·0	43 ·5
4. 30:	12. 15	3. 42	·0954	8. 7:	·02163			
9. 20	8. 35	4. 17	·0949	11. 46	·02290			
9. 39	6. 10		***	18. 17	·02651			
10. 17	8. 30	5. 35	·0955	21. 46	·02824			
11. 15	8. 10		***	23. 59	·02810			
11. 30	9. 0	8. 6	·0959					
11. 50	5. 40		***					
15. 5	10. 35	10. 5	·0955					
15. 35	9. 40	10. 33	·0959					
17. 40	10. 30	11. 27	·0960					
	***	11. 45	·0976					
20. 10	8. 40	11. 52	·0975					
	***	12. 17	·0966					
21. 30:	9. 45	12. 46	·0960					
	***	13. 47	·0962					
22. 46	13. 50		***					
23. 0	13. 0	14. 42	·0961					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 9		Feb. 9						
h m	° ′ ″	h m		h m		h m	°	°
23. 32	21. 16. 5	15. 15	·0966					
23. 59	15. 5	16. 37	·0968					
		17. 13	·0965					
			***					
		19. 35	·0969					
			***					
		21. 7	·0963					
		21. 42	·0959					
		21. 10	·0960					
		22. 45	·0954					
		23. 0	·0956					
		23. 59	·0945					
Feb. 10		Feb. 10		Feb. 10		Feb. 10		
0. 0	21. 15. 5	0. 0	·0945	0. 0	·02810	7. 25	45 ·0	45 ·5
0. 35	19. 0	0. 45	·0948	2. 20	·02861	21. 0	40 ·0	41 ·0
1. 0	18. 20	0. 50	·0944	7. 0	·02682			
1. 15	17. 0	1. 8	·0949	7. 26	·02725			
1. 36	19. 10	1. 56	·0937	9. 15:	·02678			
2. 10	18. 0	2. 18	·0948	10. 50	·02720			
2. 42	13. 55		***	11. 15	·02709			
3. 0	14. 10	3. 26	·0954		***			
3. 20	17. 0		***	13. 53	·02848			
4. 33	12. 0	4. 45	·0950		***			
5. 35	12. 0	5. 6	·0955	16. 30	·02822			
5. 54	13. 0	5. 27	·0950	20. 45	·02850			
6. 40	12. 0	5. 48	·0962	23. 59	·02781			
7. 0	2. 35	6. 7	·0951					
7. 5	3. 30	6. 26	·0958					
7. 20	1. 10	6. 56	·0934					
7. 45	10. 30	7. 17	·0934					
	***	7. 34	·0952					
10. 10	8. 0	7. 50	·0946					
10. 32	1. 30	8. 18	·0953					
10. 44	2. 30		***					
11. 0	2. 10	9. 22	·0959					
11. 20	5. 0		***					
11. 30	3. 40	10. 0	·0953					
	***	10. 5	·0958					
12. 40	9. 0	10. 17	·0951					
13. 40	7. 0	10. 35	·0983					
14. 5	10. 0	10. 46	·0985					
14. 42	6. 25	11. 11	·0955					
15. 2	7. 50	11. 33	·0962					
15. 40	1. 0	11. 47	·0945					
15. 50	1. 0	12. 20	·0950					
16. 23	6. 40	12. 47	·0958					
	***	13. 10	·0952					
17. 39	6. 50	13. 18	·0955					
18. 20	9. 10	13. 30	·0962					
18. 38	7. 45	13. 47	·0966					
18. 46	9. 30	14. 15	·0957					
18. 55	8. 5	14. 40	·0963					
19. 15	10. 15	15. 8	·0958					
	***		***					
20. 21	8. 0	15. 36	·0965					
21. 30	10. 0	16. 7	·0960					
21. 40	8. 30		***					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 10		Feb. 10						
h m	° ′ ″	h m		h m		h m	°	°
22. 50	21. 15. 0	17. 50	·0963					
23. 25	14. 0	18. 18	·0971					
23. 59	19. 0		***					
		18. 50	·0963					
		20. 6	·0963					
		20. 12	·0957					
		21. 7	·0944					
		21. 16	·0945					
			***					
		22. 35	·0925					
		23. 30	·0938					
		23. 42	·0932					
			(†)					
Feb. 11		Feb. 11		Feb. 11		Feb. 11		
0. 0	21. 19. 10		(†)	0. 0	·02781	1. 0	42 ·2	43 ·0
0. 40	25. 30	1. 0	·0920*	0. 47	·02743	3. 0	45 ·0	45 ·3
1. 55	15. 30	1. 45	·0942		(†)	9. 0	43 ·0	44 ·0
2. 16	17. 0	2. 17	·0948	3. 17	·02600	21. 0	34 ·2	37 ·0
	***	2. 36	·0939	6. 43:	·02271			
3. 23	13. 0	3. 27	·0935	9. 17	·02232			
3. 41	14. 0	3. 46	·0943	10. 6	·02250			
	***	4. 6	·0934	10. 43	·02231			
5. 54	9. 0		***	14. 22	·02500			
6. 24	4. 0	5. 35	·0941	20. 16	·02858			
6. 54	7. 30	5. 46	·0945	23. 59	·02631			
7. 45	2. 55	6. 19	·0938					
9. 16	21. 7. 45	6. 36	·0947					
9. 45	20. 57. 30		***					
10. 2	20. 55. 0	7. 20	·0943					
10. 45	21. 9. 30	7. 48	·0954					
11. 7	3. 20	8. 5	·0950					
11. 28	7. 0	8. 36	·0952					
11. 42	5. 30		***					
12. 15	6. 0	9. 33	·0945					
12. 46	10. 0	10. 11	·0990					
13. 25	8. 10	10. 22	·0991					
14. 0	10. 0	10. 47	·0957					
	***	11. 6	·0962					
16. 45	10. 0	11. 12	·0956					
17. 20	13. 35	11. 45	·0951					
	***	12. 6	·0956					
18. 50	9. 35		***					
	***	12. 47	·0949					
21. 55	7. 0	13. 38	·0956					
22. 5	11. 0		***					
	***	16. 56	·0967					
23. 30	14. 5	17. 20	·0963					
23. 46	12. 10	18. 12	·0971					
23. 59	13. 5	18. 33	·0966					
		19. 4	·0973					
		20. 15	·0972					
		21. 30	·0944					
		21. 51	·0947					
		22. 35	·0944					
		23. 59	·0949					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 12		Feb. 12		Feb. 12		Feb. 12		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 13. 5	0. 0	·0949	0. 0	·02631	1. 0	38·0	38·8
0. 36	17. 35		***	1. 50	·02559	3. 0	41·9	42·0
1. 10	14. 0	1. 46	·0947	6. 26	·02077	9. 0	43·0	43·0
2. 50:	16. 5		***		***	21. 0	38·3	39·8
	***	2. 47	·0939	7. 47	·01989			
4. 45	10. 15	3. 6	·0941		***			
	***	3. 28	·0933	12. 46	·01930			
5. 55	10. 0	3. 56	·0932	22. 35:	·02178			
6. 21	0. 0	4. 32	·0923	23. 59	·02150			
6. 35	3. 30		***					
6. 45	2. 5	4. 45	·0922					
7. 10	7. 15		***					
7. 30	8. 0	5. 10	·0928					
7. 54	8. 0	5. 36	·0943					
8. 20	21. 4. 0		***					
9. 15	20. 59. 0	5. 55	·0941					
9. 43	20. 59. 30	6. 20	·0923					
9. 55	21. 4. 0	6. 42	·0947					
10. 19	20. 58. 0		***					
10. 34	21. 0. 0	7. 10	·0954					
11. 5	21. 8. 15	7. 30	·0952					
11. 32	20. 59. 30	7. 46	·0942					
12. 0	20. 59. 0	8. 18	·0955					
12. 30	21. 7. 10	8. 36	·0947					
13. 23	6. 0		***					
14. 10	9. 0	9. 50	·0944					
15. 20	9. 50	10. 5	·0937					
16. 50:	8. 0	10. 36	·0939					
17. 40	11. 0	10. 42	·0943					
18. 13	10. 55	10. 50	·0940					
19. 10	8. 20	11. 6	·0948					
19. 30	9. 35	11. 10	·0941					
	***	11. 18	·0946					
20. 50	6. 40	11. 26	·0941					
	***	11. 47	·0948					
22. 30	7. 15	12. 0	·0946					
	***	12. 20	·0959					
23. 59	14. 0	12. 41	·0953					
		13. 22	·0959					
			***					
		14. 47	·0956					
			***					
		16. 46	·0964					
			***					
		17. 59	·0963					
		18. 27	·0970					
		19. 6	·0967					
		19. 35	·0973					
			***					
		20. 47	·0961					
			***					
		23. 59	·0945					
Feb. 13		Feb. 13		Feb. 13		Feb. 13		
0. 0	21. 14. 0	0. 0	·0945	0. 0	·02150	0. 0	41·3	42·3
2. 16	14. 0		***	2. 35	·01997	1. 0	42·6	43·7
6. 20	10. 0	1. 58	·0945	5. 46	·01588	3. 0	46·0	46·4
8. 30	9. 30	2. 22	·0942	6. 40	·01522	6. 0	48·0	48·0
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 13		Feb. 13		Feb. 13		Feb. 13		
h m	° ′ ″	h m		h m		h m	°	°
8. 50	21. 4. 30	7. 40	·0951	8. 6	·01620	9. 0	47·4	47·5
10. 15	9. 0	7. 49	·0948	14. 0	·01679	12. 0	45·7	46·6
	***	8. 36	·0952	17. 48	·01907	18. 0	40·5	42·0
11. 5	7. 40	8. 52	·0959	23. 5	·02371	21. 0	39·2	40·6
	***		***		(†)			
12. 20	9. 30	9. 47	·0931					
	***		***					
15. 45	10. 15	10. 42	·0955					
18. 0	8· 10		***					
20. 45	7. 40	11. 45	·0947					
21. 23	6. 30	12. 4	·0953					
22. 35	9. 10	12. 55	·0958					
23. 59	13. 5		***					
		13. 27	·0952					
		13. 35	·0957					
		13. 46	·0954					
			***					
		17. 53	·0969					
		18. 35	·0969					
		19. 36:	·0973					
		20. 22	·0967					
		21. 37	·0955					
			***					
		22. 33	·0957					
			***					
		23. 59	·0943					
Feb. 14		Feb. 14		Feb. 14		Feb. 14		
0. 0	21. 13. 5	0. 0	·0943		(†)	0. 0	41·0	42·2
	***		***	1. 0	·02369*	1. 0	42·3	43·8
1. 0	14. 10	2. 46	·0937	3. 0	·02208	3. 0	46·0	46·0
	***		***	6. 2	·01890	9. 0	47·2	47·5
2. 35	13. 40	4. 50	·0944	8. 17:	·01756	21. 0	46·3	46·8
5. 15:	9. 40		***	11. 25	·01763			
	***	8. 47	·0964	21. 40	·01910			
10. 5	7. 0		***	23. 59	·01847			
	***	11. 6	·0968					
13. 24	8. 30		***					
14. 24	10. 0	12. 26	·0968					
14. 54	9. 0	13. 7	·0975					
15. 55	9. 40	14. 0	·0970					
16. 22	8. 15	14. 36	·0974					
	***		***					
17. 50	9. 35	15. 45	·0971					
	***		***					
21. 16	6. 5	17. 8	·0975					
23. 40	10. 30		***					
23. 59	11. 15	19. 15	·0974					
			***					
		20. 22	0971					
			***					
		23. 59	·0935					
Feb. 15		Feb. 15		Feb. 15		Feb. 15		
0. 0	21. 11. 20	0. 0	·0935	0. 0	·01847	1. 0	49·0	48·7
1. 30:	14. 40		***	0. 47	·01831	3. 0	51·2	51·0
	***	1. 4	·0932	4. 15	·01681	9. 0	50·2	49·5
6. 25	9. 0		***	7. 43	·01742	21. 0	47·5	48·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Feb. 15		Feb. 15		Feb. 15				
h m	° ′ ″	h m		h m		h m	°	°
6. 55	21. 11. 30	2. 42	·0933	11. 10:	·01738			
	***		***	17. 15	·01997			
7. 46	10. 20	4. 47	·0945	20. 16	·02060			
8. 15	0. 0		***	23. 59	·02053			
8. 34	3. 0	5. 18	·0940					
8. 44	2. 10	5. 45	·0942					
9. 36	9. 15	5. 53	·0936					
	***	6. 7	·0937					
12. 0	9. 40	6. 20	·0934					
	***		***					
15. 55	9. 0	7. 5	·0940					
16. 24	10. 35		***					
16. 46	10. 0	7. 47	·0936					
17. 2	11. 50		***					
18. 0	8. 30	8. 25	·0954					
	***	8. 40	·0940					
20. 50	6. 5	8. 48	·0946					
	***	9. 7	·0937					
21. 45	9. 40		***					
22. 35	11. 45	10. 45	·0952					
23. 8	11. 0		***					
23. 36	16. 30	12. 47	·0956					
23. 56	14. 30	13. 3	·0954					
23. 59	15. 30		***					
		17. 36	·0961					
		18. 27	·0967					
			***					
		21. 5	·0956					
			***					
		22. 50	·0946					
		23. 30	·0931					
		23. 47	·0933					
		23. 59	·0940					
Feb. 16		Feb. 16		Feb. 16		Feb. 16		
0. 0	21. 15. 30	0. 0	·0939	0. 0	·02053	1. 0	50·8	50·7
0. 10	16. 30	0. 5	·0929		***	3. 0	53·0	53·0
0. 23	9. 30	0. 13	·0923	3. 56	{·01708	9. 0	54·0	53·8
0. 44	19. 30	0. 20	·0926		{·01750	21. 30	50·8	51·5
	***	0. 44	·0923		***			
1. 13	19. 0	0. 52	·0932	8. 50	·01802			
1. 51	16. 0		***	12. 15	·01798			
2. 5	19. 0	1. 30	·0920	15. 7	·01881			
	***	1. 55:	·0908	23. 59	·02043			
2. 45	16. 0	2. 20	·0921					
3. 22	17. 25		***					
3. 40	14. 55	3. 6	·0918					
	***	3. 35	·0926					
5. 0	13. 30	3. 47	·0919					
5. 20	11. 0	4. 36:	·0923					
	***	5. 0	·0912					
7. 0	9. 40	5. 35	·0924					
7. 55	6. 0		***					
8. 10	6. 10	6. 45	·0937					
8. 38	3. 55	7. 2	·0927					
	***	7. 20	·0925					
10. 5	2. 40		***					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Feb. 16		Feb. 16						
h m	° ′ ″	h m		h m		h m	°	°
12. 55	21. 10. 5	8. 4	·0932					
	***	8. 20	·0926					
16. 54	10. 0	8. 50	·0925					
17. 10	8. 5	9. 16	·0930					
17. 40	10. 0	9. 34	·0925					
	***	9. 46	·0927					
21. 25	7. 0	10. 3	·0923					
	***	10. 17	·0929					
23. 6	11. 30	10. 45	·0933					
23. 23	15. 0	11. 6	·0942					
	***	11. 35	·0949					
23. 59	15. 50		***					
		12. 7	·0939					
			***					
		16. 30	·0950					
		16. 46	·0957					
		17. 18	·0950					
			***					
		19. 11	·0955					
			***					
		19. 40	·0949					
			***					
		20. 35	·0946					
			***					
		22. 40	·0934					
		23. 8	·0917					
		23. 25	·0923					
		23. 35	·0920					
		23. 59	·0925					
Feb. 17		Feb. 17		Feb. 17		Feb. 17		
0. 0	21. 15. 55	0. 0	·0925	0. 0	·02043	9. 0	51·8	51·7
	***	0. 15	·0932	1. 15	·02062	21. 8	46·7	47·4
0. 59	17. 35		***	3. 36	·02031			
1. 25	15. 30	3. 3	·0921	9. 15:	·01795			
1. 47	18. 0		***	14. 39	·02031			
2. 10	15. 10	3. 45	·0931	21. 43	·02390			
	***	5. 50	·0940	23. 59	·02430			
3. 2	15. 10	6. 11	·0937					
3. 22	12. 0	6. 20	·0923					
4. 15	13. 10	6. 45	·0938					
6. 14	9. 40		***					
6. 32	3. 10	7. 8	·0936					
7. 12	8. 10	7. 25	·0942					
8. 10	9. 30		***					
	***	10. 45	·0930					
10. 15	10. 0	14. 35	·0951					
14. 24	10. 5	18. 26	·0962					
14. 39	13. 0	19. 38	·0961					
15. 7	10. 0		***					
	***	23. 0	·0935					
18. 0	9. 0	23. 11	·0940					
	***	23. 35	·0934					
21. 20	6. 15		***					
	***	23. 59	·0936					
23. 59	13. 50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 18		Feb. 18		Feb. 18		Feb. 18		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 13. 50	0. 0	·0936	0. 0	·02430	1. 0	49 ·6	50 ·2
1. 0	14. 30		***	2. 56	·02365	3. 0	52 ·3	52 ·2
	***	1. 6	·0941	8. 8	·01772	9. 5	54 ·5	53 ·5
3. 15	15. 0		***	8. 26	·01830	21. 0	49 ·0	49 ·7
	***	3. 32	·0933	12. 50	·01897			
4. 38	14. 30	4. 11	·0938	20. 15	·02320			
5. 50	9. 0	4. 56:	·0930	22. 30	·02392			
6. 10	11. 40	5. 35	·0938	23. 59	·02384			
7. 26	10. 5	5. 44	·0933					
7. 55	5. 35	6. 5	·0938					
8. 25	8. 0	6. 20	·0933					
	***	6. 45	·0941					
9. 36	6. 0		***					
10. 0	7. 5	7. 45	·0937					
10. 30	5. 0	8. 6	·0945					
10. 40	6. 50	8. 50	·0941					
12. 45	8. 0		***					
17. 30	9. 0	12. 11	·0945					
21. 30:	4. 0		***					
23. 25	11. 10	17. 46:	·0961					
23. 59	14. 50		***					
		20. 0	·0958					
			***					
		22. 17	·0933					
			***					
		23. 59	·0930					
Feb. 19		Feb. 19		Feb. 19		Feb. 19		
0. 0	21. 14. 55	0. 0	·0930	0. 0	·02384	1. 0	51 ·3	51 ·4
1. 0	18. 30		***	1. 2	·02360	3. 0	53 ·8	53 ·2
1. 25	15. 15	1. 11	·0913	2. 46	·02200	9. 0	53 ·0	53 ·5
1. 55	14. 10		***	5. 32	·01892	20. 0	47 ·0	47 ·5
2. 30:	17. 30	2. 45	·0925		·01983	21. 0	46 ·6	47 ·5
3. 35	10. 35	3. 21	·0913		***	22. 0	47 ·2	47 ·4
4. 15	12. 25	3. 46	·0920	11. 7	·01990	23. 0	47 ·4	47 ·3
6. 10:	9. 40		***	16. 38:	·02187			
16. 10	9. 15	4. 42	·0920	23. 59	·02650			
20. 45	5. 10		***					
20. 50	7. 30	10. 15	·0941					
21. 7	8. 0		***					
21. 16	5. 30	17. 42	·0957					
	***		***					
23. 59	13. 0	19. 50:	·0956					
			***					
		22. 42	·0928					
			***					
		23. 59	·0926					
Feb. 20		Feb. 20		Feb. 20		Feb. 20		
0. 0	21. 13. 0	0. 0	·0926	0. 0	·02650	0. 0	48 ·2	48 ·3
0. 10	14. 5		***	1. 17	·02683	1. 0	48 ·9	48 ·8
0. 21	13. 5	3. 6	·0933	5. 16	·02581	2. 0	50 ·0	49 ·3
1. 30:	15. 35	5. 55	·0953	9. 45	·02673	3. 0	50 ·7	49 ·4
5. 40	9. 40	6. 46	·0955	13. 40	·02798	6. 0	50 ·7	49 ·3
	***	7. 15	·0959	15. 6:	·02873	9. 0	50 ·0	49 ·0
10. 45	6. 30		***	20. 17	·02800	12. 0	49 ·3	49 ·8
15. 0	9. 30	10. 35	·0961	22. 16	·02876	18. 0	49 ·0	49 ·0
	***	10. 47	·0970	23. 59	·02862	21. 0	49 ·0	49 ·5

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 20		Feb. 20				Feb. 20		
h m	° ′ ″	h m		h m		h m	°	°
16. 30	21. 7. 10	11. 28	·0963			22. 0	49 ·5	49 ·2
	***	14. 37	·0969			23. 0	50 ·0	49 ·3
18. 25	7. 0	15. 36	·0962					
19. 24	10. 0		***					
20. 20	6. 5	20. 27	·0961					
20. 32	7. 0		***					
20. 55	5. 55	22. 6	·0937					
22. 2	9. 0	22. 17	·0942					
22. 20	12. 0		***					
23. 35	14. 0	23. 59	·0928					
23. 59	15. 0							
Feb. 21		Feb. 21		Feb. 21		Feb. 21		
0. 0	21. 15. 0	0. 0	·0928	0. 0	·02862	0. 0	51 ·2	51 ·3
	***		***		***	1. 0	51 ·8	51 ·6
0. 55	17. 0	0. 38	·0922	4. 7	·02710	3. 0	53 ·3	53 ·1
1. 30	16. 30		***		***	9. 0	52 ·6	52 ·7
2. 7	18. 30	2. 7	·0937	6. 0	·02671	21. 0	47 ·8	48 ·3
2. 40	15. 30	2. 40	·0931		***			
	***		***	11. 27:	·02370			
3. 40	15. 35	3. 47	·0945		***			
4. 40	11. 15	4. 18	·0942	18. 16	·02632			
4. 51	12. 0	5. 0	·0955	22. 27	·02821			
5. 3	10. 30	5. 8	·0950	23. 50	·02820			
5. 10	21. 12. 0	5. 17	·0954		(†)			
5. 45	20. 59. 0	5. 36	·0934					
6. 25	21. 14. 0		***					
6. 32	11. 0	6. 15	·0955					
6. 44	10. 30	6. 42	·0930					
7. 0	13. 0		***					
7. 15	12. 5	7. 20	·0929					
7. 40	4. 10	7. 42	·0916					
7. 46	5. 0	7. 56	·0924					
	***		***					
8. 30	2. 0	8. 35	·0917					
8. 40	4. 35		***					
9. 2	6. 30	9. 7	·0923					
9. 19	3. 0	9. 25	·0933					
9. 39	7. 30		***					
10. 8	8. 30	10. 30	·0939					
10. 45	21. 5. 55	10. 47	·0925					
11. 7	20. 49. 10	11. 0	·0936					
11. 45	21. 0. 30	11. 15	·0912					
12. 46	2. 10	11. 24	·0930					
13. 0	7. 10	11. 36	·0923					
13. 16	7. 40		***					
13. 45	11. 10	12. 5	·0920					
	***	12. 35	·0938					
15. 7	11. 0		***					
16. 0	10. 0	13. 12	·0928					
	***		***					
18. 35	10. 20	14. 24	·0940					
	***		***					
21. 0	7. 0	17. 45	·0946					
22. 2	10. 55		***					
22. 40	15. 30	20. 15	·0948					
23. 59	18. 0		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 21 h m		h m		h m	°	°
		22. 17	·0923 ***					
		23. 59	·0920					
Feb. 22		Feb. 22		Feb. 22		Feb. 22		
0. 0	21. 18. 0	0. 0	·0920 ***		(†)	1. 0	51·4	51·3
0. 20	19. 0			0. 7	·02391	3. 0	54·0	54·0
0. 45	23. 0	0. 26	·0914	3. 6	·02163	9. 0	54·6	54·2
1. 5	23. 0	1. 7	·0916	4. 17	·02009	21. 0	50·0	52·0
1. 35	17. 15	1. 18	·0910 ***	6. 18	·01952 ***			
2. 30	19. 30							
6. 0:	11. 0	2. 40	·0920 ***	14. 43	·01932			
7. 15	9. 35			23. 59	·02190			
7. 39	7. 10	4. 0	·0915 ***					
7. 46	8. 0							
7. 58	4. 0	8. 0	·0922					
8. 11	9. 30	8. 15	·0938					
9. 0	1. 0 ***	8. 42	·0914 ***					
10. 20	7. 5	10. 19	·0928					
10. 46	4. 10	10. 47:	·0923					
11. 0	5. 0 ***	11. 20	·0931 ***					
11. 55	3. 0	13. 36	·0932					
12. 18	0. 55	14. 15	·0939					
13. 30	9. 0	15. 7:	·0936					
14. 10	7. 0	15. 48	·0943 ***					
14. 40	4. 0							
15. 2	6. 25 ***	19. 0	·0940 ***					
17. 0	8. 20 ***	19. 46	·0929					
		20. 17	·0930 ***					
20. 54	6. 10							
23. 0	12. 30	21. 42	·0917 ***					
23. 59	14. 15							
		22. 46	·0918					
		23. 15	·0912					
		23. 35	·0915					
		23. 59	·0912					
Feb. 23		Feb. 23		Feb. 23		Feb. 23		
0. 0	21. 14. 15	0. 0	·0912	0. 0	·02190	1. 0	52·6	53·0
1. 50:	16. 30	0. 56	·0910 ***	1. 36	·02188	3. 0	53·7	54·8
3. 0	15. 0			5. 37	·01967	9. 0	53·0	54·0
5. 0	10. 30	4. 36	·0937	13. 5	·02002	22. 0	48·0	50·5
10. 30	10. 0	5. 5	·0934 ***	23. 59	·02490			
14. 0	10. 0 ***	8. 25	·0941					
20. 55	6. 30	10. 30	·0940 ***					
23. 0	11. 55							
23. 59	12. 40	18. 35	·0948 ***					
		19. 47	·0946 ***					
		20. 45	·0938 ***					
		22. 40	·0931					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 23 h m		h m		h m	°	°
		22. 47	·0925					
		23. 59	·0936					
Feb. 24		Feb. 24		Feb. 24		Feb. 24		
0. 0	21. 12. 40	0. 0	·0936 ***	0. 0	·02490	10. 10	48·5	49·5
0. 44	14. 0			1. 37	·02563	21. 0	46·2	46·6
1. 17	17. 40	0. 45	·0930	12. 29	·02765			
1. 45	14. 40	1. 10	·0937	13. 20	·02764			
2. 30	15. 10	1. 45	·0933	16. 52	·02890			
4. 44	10. 15	2. 51	·0944 ***	23. 59	·02839			
5. 20	6. 0							
5. 45	8. 30	4. 45	·0948 ***					
8. 0	9. 0							
8. 25	7. 0 ***	5. 8	·0937					
		5. 40	·0943					
10. 14	8. 0	6. 25	·0942					
10. 43	4. 0	6. 46	·0947 ***					
12. 0	4. 50							
12. 50	12. 0	8. 7	·0937					
13. 20	6. 10	8. 38	·0939					
13. 46	8. 15 ***	9. 3	·0937 ***					
18. 55	7. 10	10. 42	·0948 ***					
19. 41	9. 15 ***							
		11. 37	·0946					
20. 40	7. 20 ***	12. 35	·0954					
		12. 45	·0962					
23. 59	15. 30	13. 4	·0958					
		13. 35	·0958					
		14. 2	·0952 ***					
		15. 43	·0955 ***					
		18. 26	·0955 ***					
		21. 27	·0934					
		21. 44	·0935 ***					
		22. 51	·0923					
		23. 0	·0916 ***					
		23. 59	·0921					
Feb. 25		Feb. 25		Feb. 25		Feb. 25		
0. 0	21. 15. 35	0. 0	·0921 ***	0: 0	·02837	1. 0	49·4	49·8
1. 55	16. 0			1. 52	·02751	3. 0	51·0	51·6
5. 0:	10. 40	2. 50	·0922 ***	10. 45:	·02290	9. 0	50·5	51·2
7. 35	9. 50			21. 30	·02932 ***	21. 0	43·3	45·3
8. 20	7. 15	4. 17	·0925 ***					
9. 5	9. 30 ***			23. 59	·02814			
		7. 50	·0938					
10. 0	9. 20	8. 8	·0936 ***					
11. 15	10. 15							
18. 0:	9. 10	17. 30	·0957					
21. 15:	7. 0 ***	20. 40	·0954					
		21. 43	·0943 ***					
23. 25	15. 0							
23. 45	13. 45	22. 35	·0926					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Feb. 25	
h m	° ′ ″
23. 59	21. 14. 50
Feb. 26	
0. 0	21. 14. 55
0. 35	13. 0
1. 15	15. 20 ***
2. 52	14. 0 ***
4. 0	10. 30
10. 10:	7. 35
16. 20	9. 10
20. 0	7. 25
20. 45	4. 35
21. 0	6. 20
21. 40	7. 0 ***
23. 5	14. 5 ***
23. 56	14. 0 (†)
Feb. 27	
	(†)
0. 15	21. 18. 15 ***
1. 15	22. 0
1. 24	27. 30
1. 35	24. 0
1. 54	20. 50
2. 5	22. 20
2. 30	17. 40
2. 40	20. 30
3. 8	21. 30
3. 16	29. 40
3. 30	23. 0
3. 33	25. 0
4. 0	18. 5
4. 15	20. 30
4. 42	14. 0
4. 55	15. 30
5. 8	13. 10
5. 35	17. 0
6. 7	8. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 25	
h m	
22. 42	·0920
22. 49	·0926 ***
23. 59	·0936
Feb. 26	
0. 0	·0936
1. 7	·0932
1. 36	·0938
2. 17	·0931 ***
4. 13	·0927 ***
9. 6	·0947
9. 17	·0941 ***
11. 56	·0948
12. 8	·0944 ***
13. 7	·0954 ***
14. 3	·0949 ***
15. 15	·0951
15. 36	·0957
15. 45	·0954
16. 40	·0960 ***
18. 46	·0959
21. 45	·0941 (†)
23. 28	·0944
23. 45	·0942
23. 47	·0949
23. 59	·0946
Feb. 27	
0. 0	·0946
0. 33	·0938 ***
1. 4	·0945
1. 8	·0940
1. 15	·0959
1. 22	·0942
1. 27	·0946
1. 45	·0933
2. 3	·0940 ***
2. 20	·0931
2. 39	·0936 ***
3. 7	·0931
3. 16	·0955
3. 30	·0936
3. 35	·0942
3. 50	·0915
4. 16	·0927
4. 28	·0919 ***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Feb. 26	
0. 0	·02814
1. 35:	·02790
7. 0	·01945
12. 7:	·01796
22. 15	·02536
23. 59	·02643
Feb. 27	
0. 0	·02643 ***
1. 47:	·02602 ***
3. 55	·02371 ***
6. 43	·02143
7. 6	·02182
7. 17	·02071
7. 36	·02032
7. 48	·02100 ***
8. 20	·02003 ***
10. 26	·01991
10. 45	·02048 ***
11. 50	·01970
12. 5	·02023 ***
13. 7	·01998 ***

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Feb. 26		
1. 0	47 ·8	47 ·7
3. 0	51 ·3	52 ·2
9. 0	52 ·0	52 ·5
20. 0	43 ·4	45 ·0
21. 0	43 ·2	45 ·2
Feb. 27		
0. 0	45 ·7	46 ·0
1. 0	47 ·2	48 ·3
2. 0	48 ·3	49 ·0
3. 0	49 ·8	50 ·3
4. 0	50 ·0	50 ·0
6. 0	50 ·7	49 ·4
9. 0	50 ·0	49 ·2
12. 0	49 ·2	48 ·8
18. 0	45 ·5	46 ·0
21. 0	46 ·0	47 ·2
22. 0	47 ·0	47 ·7
23. 0	47 ·3	47 ·9

Greenwich Mean Solar Time.	Western Declination.
Feb. 27	
h m	° ′ ″
6. 30	21. 27. 0
6. 55	18. 0
7. 15	8. 30
7. 25	21. 13. 0
7. 40	20. 47. 30
7. 45	56. 0
7. 55	20. 54. 0
8. 8	21. 9. 35
8. 23	2. 0
8. 34	6. 0
8. 44	4. 0
8. 55	8. 0
9. 17	3. 5
9. 25	4. 35
9. 38	21. 0. 0
9. 53	20. 59. 0
10. 0	21. 0. 0
10. 11	20. 59. 0
10. 40	52. 40
10. 53	20. 53. 0
11. 10	21. 2. 0
11. 30	20. 40. 0 (†)
12. 30	46. 40 ***
13. 17	58. 30
13. 34	55. 10 ***
14. 31	59. 0
15. 25	56. 0
15. 43	56. 30
16. 2	20. 53. 30
17. 0	21. 5. 0
17. 8	5. 0
17. 24	9. 5
17. 33	9. 35
17. 48	7. 35
18. 5	9. 0
18. 29	6. 0
18. 55	10. 0
19. 40	11. 0 ***
20. 44	8. 20 ***
23. 59	20. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 27	
h m	
5. 6	·0930
5. 17	·0917
5. 40	·0927
5. 55	·0914
6. 33	·0939
6. 44	·0923
6. 50	·0932
7. 6	·0894
7. 17	·0902
7. 29	·0865
7. 43	·0897
7. 48	·0889
8. 3	·0918
8. 10	·0885
8. 22	·0894 ***
9. 11	·0897
9. 27	·0907
9. 40	·0893 ***
10. 18	·0888
10. 42	·0903
10. 57	·0902
11. 32	·0873
11. 42	·0882
12. 2	·0917
12. 7	·0903
12. 22	·0918 ***
12. 47	·0924
13. 8	·0912
13. 20	·0920 ***
13. 46	·0916 ***
15. 0	·0921
15. 27	·0934 ***
16. 0	·0936 ***
16. 59	·0919
17. 45	·0939
18. 27	·0920
18. 46	·0921 ***
20. 5	·0936 ***
20. 48	·0929 ***
21. 40	·0906 ***
22. 12	·0901
22. 20	·0913
22. 27	·0903 ***
23. 8	·0902
23. 36	·0913
23. 42	·0905

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Feb. 27	
h m	
15. 16	·02150 ***
19. 18:	·02294 ***
23. 36	·02331
23. 59	·02302

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 27 h m		h m		h m	°	°
		23. 50	·0908					
		23. 59	·0905					
Feb. 28		Feb. 28		Feb. 28		Feb. 28		
0. 0	21. 20. 0	0. 0	·0905	0. 0	·02302	0. 0	48 ·4	48 ·8
	***		***					
				0. 47	{·02221	1. 0	49 ·7	50 ·2
					{·02263	2. 0	51 ·3	51 ·5
1. 46	24. 0	0. 36	·0906			3. 0	52 ·0	52 ·0
1. 58	15. 0	1. 35	·0914	2. 6	·02243	9. 0	51 ·4	51 ·8
2. 15	18. 30		***		***	21. 0	47 ·0	47 ·5
2. 36	14. 40	1. 50	·0895	3. 35	·02031			
3. 16	19. 10	2. 6	·0940	3. 56	·02062			
3. 30	18. 0	2. 18	·0927		***			
3. 45	14. 30		***	4. 50	·02002			
4. 3	15. 30	3. 6	·0929		***			
4. 32	4. 10	3. 19	·0916	6. 40	·02090			
4. 50	14. 0	3. 27	·0923		***			
4. 55	11. 30	3. 40	·0911	8. 43	·02090			
5. 10	15. 30	3. 52	·0912		***			
5. 15	14. 30	4. 8	·0905	9. 30	·01983			
5. 20	15. 30	4. 40	·0934	9. 45	·02056			
5. 26	11. 35	4. 48	·0910		***			
5. 39	14. 25	5. 0	·0913	13. 36	·02180			
5. 51	9. 30		***	14. 7	·02108			
6. 0	10. 55	5. 42	·0898	15. 31	·02320			
6. 25	8. 35		***	17. 43	·02496			
6. 44	0. 0	6. 20	·0905		***			
7. 24	9. 30	6. 42	·0889	21. 36	·02890			
7. 35	7. 0	6. 48	·0896	23. 18	{·02924			
7. 43	7. 30	7. 5	·0911		{·03010			
7. 55	5. 35	7. 27	·0893	23. 59	·02978			
8. 5	8. 0		***					
8. 35	8. 0	8. 42	·0895					
8. 49	21. 6. 30	8. 48	·0884					
9. 0	20. 44. 20	9. 20	·0967					
9. 41	21. 11. 10	9. 45	·0886					
9. 54	20. 56. 40	10. 3	·0911					
10. 15	21. 0. 30		***					
10. 50	20. 59. 5	10. 55	·0905					
11. 45	53. 10	11. 20	·0924					
12. 15	51. 30		***					
13. 7	50. 55	12. 13	·0907					
13. 37	56. 5		***					
13. 45	20. 55. 10	12. 37	·0908					
13. 55	21. 12. 30	13. 3	·0922					
14. 54	20. 56. 15		***					
15. 29	21. 6. 0	13. 37	·0916					
15. 50	20. 58. 0	13. 48	·0894					
16. 55	21. 17. 10	14. 7	·0921					
17. 2	16. 15	14. 16	·0915					
17. 32	23. 30	14. 43	·0922					
17. 50	16. 10	15. 8	·0941					
18. 6	17. 0	15. 35	·0960					
18. 15	14. 10	16. 14:	·0932					
18. 30	16. 0	17. 4	·0957					
19. 0	13. 30	17. 29	·0936					
	***		***					
19. 40	13. 30	18. 36	·0954					
19. 45	10. 20	18. 47	·0949					
19. 54	15. 30	19. 8	·0933					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 28 h m	° ′ ″	Feb. 28 h m		h m		h m	°	°
20. 8	21. 9. 10	19. 37	·0921					
20. 18	9. 10	19. 45	·0940					
20. 30	12. 0	19. 56	·0921					
21. 13	7. 35		***					
	***	21. 21	·0928					
23. 0	13. 30		***					
23. 58	20. 35	22. 38	·0915					
			***					
		23. 30	·0916					
		23. 59	·0897					
Mar. 1		Mar. 1		Mar. 1		Mar. 1		
0. 0	21. 19. 40	0. 0	·0897	0. 0	·02978	1. 0	50 ·0	50 ·2
	***		***	2. 22	·02830	3. 0	52 ·3	52 ·5
1. 46	17. 55	1. 5	·0892		***	9. 0	50 ·5	51 ·0
2. 10	21. 30	1. 47	·0903	5. 13	·02578	21. 0	43 ·2	44 ·8
2. 54	20. 0		***	7. 22	·02329			
3. 20	17. 0	2. 35	·0905	8. 17	·02300			
3. 55	17. 0		(†)		***			
4. 26	21. 15. 0	3. 0	·0905*	9. 16	·02209			
4. 58	20. 57. 0	3. 44	·0925		***			
5. 50	21. 12. 0		***	13. 7	·02458			
6. 1	11. 0	4. 15	·0915	13. 36	·02417			
6. 15	13. 0	4. 25	·0919	15. 37	·02596			
6. 32	12. 0	4. 37	·0899	21. 16	·02973			
7. 0	14. 50	4. 56	·0935	23. 59	·02981			
7. 23	21. 12. 0	5. 35	·0919					
7. 48	20. 58. 0	6. 0	·0922					
8. 1	21. 12. 5	6. 12	·0917					
8. 23	20. 58. 10	6. 42	·0922					
8. 39	21. 6. 10	7. 20:	·0906					
8. 46	3. 10	7. 50	·0952					
9. 0	9. 30	8. 5	·0921					
9. 32	7. 30	8. 27	·0950					
9. 55	8. 30	9. 17	·0903					
	***		***					
11. 25	0. 30	9. 55	·0916					
12. 0	2. 40		***					
12. 25	9. 55	11. 20	·0910					
12. 40	7. 0		***					
13. 10	14. 30	12. 26	·0918					
	***	12. 40	·0910					
14. 40	4. 10	13. 8	·0923					
	***	13. 36	·0914					
16. 10	11. 0	14. 40	·0936					
16. 36	11. 0	15. 25	·0935					
16. 52	13. 30	15. 40	·0939					
17. 35	9. 30	16. 20	·0937					
18. 20:	11. 0	16. 42	·0927					
19. 25	10. 15		***					
19. 55	7. 40	18. 27	·0950					
20. 45	12. 0		***					
	***	20. 16	·0931					
21. 32	10. 25		***					
23. 0	14. 0	21. 5	·0926					
23. 59	13. 35		***					
		22. 7	·0908					
			***					
		23. 59	·0907					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 2		Mar. 2		Mar. 2		Mar. 2		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 13. 35	0. 0	·0907	0. 0	·02981	1. 0	47 ·4	47 ·4
0. 40	13. 0		***	1. 27	·02905	3. 0	49 ·8	50 ·2
1. 52	17. 0	0. 47	·0902	5. 7	·02549	9. 0	50 ·5	49 ·3
2. 13	16. 0		***	5. 20	·02549	21. 49	52 ·0	52 ·4
2. 25	17. 0	2. 5	·0918		***			
2. 40	15. 10		***	6. 46	·02410			
	***	2. 30	·0912	11. 22	·02512			
3. 45	14. 35		***	14. 50:	·02531			
	***	3. 2	·0931	19. 45:	·02398			
4. 20	10. 0		***	23. 3	·02163			
4. 56	13. 0	3. 47	·0933	23. 59	·02130			
5. 10	4. 30		***					
5. 30	21. 11. 0	4. 16	·0922					
5. 46	20. 54. 0		***					
6. 30	21. 11. 35	4. 47	·0930					
6. 55	9. 30	5. 7	·0928					
7. 5	11. 35	5. 18	·0915					
10. 40	7. 5	5. 37	·0946					
11. 0	2. 0	5. 50	·0915					
12. 45	9. 0	6. 8	·0962					
14. 35	8. 20	6. 47	·0925					
	***	7. 5	·0934					
16. 40	11. 0		***					
17. 7	9. 0	9. 22	·0948					
18. 10	9. 0		***					
19. 25:	6. 0	10. 47	·0943					
21. 25	8. 30	11. 13	·0963					
22. 5	12. 0	11. 36	·0947					
23. 59	14. 20	11. 47	·0952					
			***					
		12. 33	·0947					
			***					
		16. 37	·0955					
		17. 15	·0961					
			***					
		19. 0	·0952					
			***					
		19. 42	·0936					
			***					
		23. 59	·0893					
Mar. 3		Mar. 3		Mar. 3		Mar. 3		
0. 0	21. 14. 25	0. 0	·0893	0. 0	·02130	9. 6	51 ·0	52 ·0
0. 55	17. 0		***	2. 41	·02123	21. 0	45 ·7	46 ·8
	***	1. 45	·0912	5. 15	·01930			
3. 40	18. 5		***	8. 52:	·01898			
5. 45	11. 25	5. 8	·0922	20. 16	·02493			
6. 0	9. 10	5. 47	·0918	23. 59	·02640			
7. 20	10. 0	6. 38	·0925					
7. 45	9. 0		***					
8. 10	9. 30	10. 36:	·0934					
8. 35	7. 30	19. 37	·0951					
9. 55:	9. 55	22. 40	·0930					
18. 30	9. 40	23. 59	·0932					
19. 55	8. 35							
20. 44	6. 10							
23. 59	15. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 4		Mar. 4		Mar. 4		Mar. 4		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 15. 30	0. 0	·0932	0. 0	·02640	1. 0	47 ·4	47 ·2
	***	2. 37	·0924	2. 40	·02631	3. 0	49 ·5	48 ·6
1. 45	12. 0		***	9. 18:	·02243	9. 0	48 ·8	49 ·0
4. 40	8. 0	3. 45	·0921	19. 16	·02630	21. 0	43 ·0	44 ·2
5. 5	10. 0		***	23. 59	·02837			
6. 55	9. 0	5. 11	·0930					
	***		***					
8. 42	5. 0	7. 27	·0934					
9. 30	7. 10	7. 46	·0940					
10. 35:	7. 40		***					
18. 0	7. 0	8. 45	·0935					
18. 55	7. 20	13. 46	·0953					
21. 10	14. 0	16. 40	·0955					
22. 30	14. 15		***					
	(†)	18. 39	·0939					
			***					
		20. 18	·0937					
		20. 37	·0931					
		21. 7	·0933					
			(†)					
Mar. 5		Mar. 5		Mar. 5		Mar. 5		
	(†)		(†)	0. 0	·02837	1. 10	46 ·3	45 ·8
0. 55	21. 13. 30	1. 10	·0930*	2. 26	·02830	3. 0	47 ·8	48 ·2
3. 25	12. 0	1. 27	·0930	9. 0	·02340	9. 0	50 ·0	50 ·5
5. 0	10. 0	4. 22	·0942	15. 45:	·02196	20. 0	49 ·3	49 ·5
5. 52	10. 55	10. 3	·0953	23. 59	·02332	21. 7	49 ·6	49 ·4
8. 30	9. 10	12. 23	·0952			22. 0	50 ·3	50 ·2
10. 55	8. 40	13. 3	·0956			23. 0	50 ·8	50 ·4
11. 14	7. 35	14. 8	·0950					
12. 40	9. 15		***					
13. 40	7. 30	18. 20	·0960					
15. 24	8. 0	18. 47	·0964					
16. 51	6. 0	19. 8	·0954					
17. 25	7. 0	19. 37	·0959					
18. 10	5. 30		***					
18. 50	6. 0	22. 38	·0932					
19. 0	7. 30		***					
19. 15	4. 30	23. 17	·0930					
19. 28	4. 0	23. 42	·0920					
19. 36	6. 0	23. 59	·0922					
19. 55	4. 0							
	***							
22. 15	13. 5							
22. 25	17. 30							
22. 43	14. 30							
23. 24	19. 10							
	***							
23. 59	17. 0							
Mar. 6		Mar. 6		Mar. 6		Mar. 6		
0. 0	21. 17. 0	0. 0	·0922	0. 0	·02332	0. 0	51 ·4	50 ·7
0. 40:	19. 10	2. 5	·0910	1. 47	·02223	1. 0	52 ·4	52 ·2
2. 15	14. 0	3. 42	·0919	4. 3	·01976	2. 0	54 ·2	53 ·1
3. 5	13. 50	6. 17	·0937	5. 8	·01923	3. 0	55 ·0	54 ·2
5. 0:	9. 40	6. 46	·0933	6. 37	·01921	4. 0	55 ·0	53 ·5
15. 30	9. 55	10. 42	·0935	6. 52	·01974	6. 0	55 ·0	54 ·0
15. 55	12. 0	15. 52	·0941	13. 42:	·02123	9. 0	53 ·7	54 ·5
16. 15	9. 0	16. 45	·0947	20. 18	·02539	12. 0	53 ·0	53 ·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 6		Mar. 6		Mar. 6		Mar. 6		
h m	° ′ ″	h m		h m		h m	°	°
18. 30	8. 0	17. 12	·0944	23. 59	·02731	20. 0	46 ·5	47 ·4
20. 15	4. 0	17. 45	·0947			21. 0	46 ·8	47 ·3
	***	19. 13	·0943			22. 0	46 ·8	47 ·0
23. 59	16. 40		***			23. 0	47 ·0	46 ·8
		23. 12	·0913					
			***					
		23. 59	·0914					
Mar. 7		Mar. 7		Mar. 7		Mar. 7		
0. 0	21. 16. 45	0. 0	·0914	0. 0	·02731	0. 0	47 ·5	47 ·2
1. 10	16. 0		***	1. 56	·02679	1. 0	48 ·3	48 ·2
1. 40	16. 30	0. 47	·0920	6. 3	·02132	3. 0	51 ·0	51 ·0
2. 15	14. 5	1. 6	·0914	6. 27	{·02117	9. 0	51 ·4	50 ·8
5. 0:	9. 35		***		{·02176	21. 0	50 ·8	51 ·5
	***	2. 47	·0924		***			
11. 0	8. 30		***	9. 25	·02203			
17. 30	8. 15	6. 45	·0929	12. 43	·02351			
	***	7. 36	·0935	17. 28:	·02573			
21. 5	5. 35	8. 27	·0935		***			
23. 10	13. 30		***	20. 37:	·02580			
23. 59	14. 40	10. 39	·0936		***			
			***	23. 59	·02442			
		14. 8	·0951					
		17. 5	·0962					
		18. 33	·0965					
		19. 36	·0959					
			***					
		21. 45	·0937					
			***					
		23. 59	·0930					
Mar. 8		Mar. 8		Mar. 8		Mar. 8		
0 0	21. 14. 50	0. 0	·0930	0. 0	·02442	1. 0	55 ·6	55 ·4
5. 0	9. 15		***	1. 6	·02396	3. 0	57 ·8	57 ·5
8. 30:	9. 0	3. 2	·0923	3. 18	·02095	9. 0	57 ·8	58 ·5
16. 45	8. 30		***	5. 17	·02016	21. 0	48 ·2	49 ·8
18. 52	9. 0	9. 36	·0940	13. 36:	·02180			
	***		***	20. 7	·02742			
19. 32	4. 55	12. 45	·0935	20. 46	·02843			
	***	17. 3	·0943	21. 55	·02861			
23. 0	22. 50	19. 5	·0939	23. 59	·02812			
	(†)	19. 29	·0950					
		19. 37	·0938					
		19. 46	·0949					
			***					
		21. 52	·0938					
		23. 59	·0939					
Mar. 9		Mar. 9		Mar. 9		Mar. 9		
	(†)	0. 0	·0939	0. 0	·02812	1. 0	51 ·3	51 ·6
0. 15	21. 22. 30	1. 10	·0942		***	3. 0	53 ·9	54 ·7
	***	1. 44	·0925	1. 46	·02576	9. 45	53 ·3	53 ·7
1. 15	28. 0	2. 40	·0919		***	22. 36	48 ·8	49 ·2
1. 46	24. 10	2. 58	·0924	4. 40	·02160			
2. 15	26. 30	3. 14	·0921		***			
2. 50	23. 30	3. 30	·0925	5. 37	·02137			
3. 0	26. 0		(†)	6. 15:	·02062			
3. 21	23. 0	6. 3	·0898	6. 45	·02051			
3. 50	25. 0	6. 27	·0902	7. 7	·02150			
					***			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 9		Mar. 9		Mar. 9				
h m	° ′ ″	h m		h m		h m	°	°
4. 10	23. 5	6. 40	·0907	9. 42	·02042			
	***	7. 4	·0888	10. 17	·01879			
5. 14	24. 30	7. 16	·0903	10. 26	·01918			
5. 19	29. 30	7. 39	·0886	10. 45	·01830			
5. 45	14. 0		***		(†)			
5. 55	20. 30	8. 25	·0900	15. 17	·02381			
6. 20	14. 50	8. 29	·0894	17. 16	·02730			
7. 0	21. 15	8. 40	·0916	18. 35:	·02822			
7. 16	14. 30	8. 55	·0889	23. 59	·02768			
7. 30	17. 25	9. 32	·0882					
8. 7	8. 10	9. 46	·0856					
8. 24	21. 11. 0	10. 30	·0912					
8. 40	20. 58. 0	10. 54	·0852					
9. 0	21. 9. 0		(†)					
9. 24	7. 30	11. 13	·0852					
9. 30	4. 0	11. 44	·0912					
9. 44	21. 4. 30	11. 48	·0903					
9. 57	20. 55. 0	11. 55	·0910					
10. 31	21. 14. 10	11. 59	·0905					
10. 45	21. 9. 10	12. 1	·0907					
11. 0	20. 55. 5	12. 14	·0882					
11. 44	21. 28. 30	12. 21	·0920					
11. 50	0. 0	12. 40	·0854					
12. 1	8. 0	13. 11	·0886					
12. 10	4. 25	13. 27	·0897					
12. 35	21. 18. 35	13. 49	·0870					
13. 7	20. 59. 30	13. 59	·0873					
13. 32	20. 59. 10	14. 10	·0852					
13. 45	21. 4. 40		(†)					
14. 5	0. 0	14. 30	·0852					
14. 15	6. 5	15. 14	·0923					
14. 47	0. 0	15. 17	·0919					
15. 11	4. 15	15. 24	·0924					
15. 23	11. 35	15. 29	·0922					
	***	15. 31	·0925					
15. 36	12. 10	15. 40	·0918					
15. 45	15. 30	15. 44	·0925					
	***	15. 47	·0920					
16. 3	15. 10	15. 55	·0924					
	***	16. 0	·0918					
16. 30	8. 0	16. 9	·0924					
16. 38	9. 50	16. 12	·0922					
16. 43	9. 0	16. 15	·0925					
16. 48	12. 0	16. 20	·0919					
	***	16. 26	·0924					
19. 10:	8. 15	16. 34	·0915					
	***	16. 39	·0922					
20. 0	10. 30	16. 45	·0915					
20. 5	21. 15. 0	16. 49	·0919					
20. 10	10. 30	16. 55	·0915					
	***	18. 11	·0931					
22. 0	17. 20	18. 28	·0925					
22. 25	21. 0	18. 54	·0929					
22. 35	18. 5	19. 0	·0925					
22. 45	23. 0	19. 29	·0930					
23. 45	19. 20	19. 37	·0927					
23. 58	21. 15	19. 42	·0934					
		19. 45	·0928					
		19. 47	·0936					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar. 9 h m		h m		h m	°	°
		19. 57	·0925					
		20. 0	·0932					
		20. 11	·0916					
		21. 29	·0907					
		21. 42	·0911					
		21. 54	·0905					
		22. 10	·0917					
		22. 32	·0901					
		22. 44	·0920					
		23. 59	·0918					
Mar. 10		Mar. 10		Mar. 10		Mar. 10		
0. 0	21. 21. 0 ***	0. 0	·0918 ***	0. 0	·02768	8. 51	54 ·5	55 ·0
				1. 45	·02710	21. 0	46 ·6	47 ·3
0. 38	21. 10	1. 5	·0921	5. 45	·02080			
0. 45	24. 30	1. 30	·0934	10. 31:	·01821			
0. 50	22. 10	1. 42	·0925	17. 45	·02483			
1. 25	27. 5	1. 50	·0928	22. 13	·02760			
2. 8	21. 0	2. 15	·0902	23. 59	·02727			
2. 25	23. 30	2. 29	·0905					
2. 46	23. 25	2. 36	·0899					
3. 0	21. 5	2. 47	·0911					
3. 25	22. 30 ***	2. 51	·0902					
		3. 20	·0923 ***					
5. 25	17. 10 ***							
		4. 45	·0915					
6. 40	16. 40	5. 20	·0923					
7. 25	10. 30	5. 36	·0918					
8. 16	17. 0	6. 0	·0930 ***					
8. 30	15. 35							
9. 44	18. 0	6. 34	·0931 ***					
10. 27	15. 45							
11. 10	15. 30	7. 20	·0917 ***					
11. 21	12. 0							
11. 35	13. 5	7. 48	·0924 ***					
12. 0:	11. 0 ***							
		8. 46	·0915 ***					
12. 50	15. 0 ***							
		9. 47	·0926 ***					
13. 30	14. 30 ***							
		10. 6	·0919 ***					
13. 55	16. 5							
14. 30	14. 5	11. 40	·0938					
14. 45	15. 15	11. 50	·0931					
15. 2	13. 10 ***	12. 6	·0937 ***					
17. 40	14. 0 ***	12. 55	·0925 ***					
19. 0:	10. 30 ***	16. 29	·0946 ***					
22. 0	23. 20	18. 50	·0934 ***					
22. 45	25. 0							
	(†)	19. 45	·0937 ***					
		20. 47	·0912 ***					
		22. 0	·0903 ***					
		23. 59	·0905					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 11 h m	° ′ ″	Mar. 11 h m		Mar. 11 h m		Mar. 11 h m	°	°
	(†)	0. 0	·0905	0. 0	·02727	1. 0	48 ·9	48 ·6
0. 30	21. 23. 30 ***	3. 40	·0908	2. 5	·02621	3. 0	51 ·4	51 ·2
		3. 48	·0904 ***	5. 18	·02140	9. 0	49 ·0	50 ·0
2. 0	26. 0 ***			8. 47	·02113	21. 0	42 ·3	43 ·6
		6. 45	·0931 ***	14. 18	·02442			
3. 46	24. 0			14. 50	·02406			
5. 30	19. 15	13. 37	·0953	18. 8	·02721			
8. 45	17. 30	14. 0	·0952	23. 59	·02543			
12. 45	15. 10	14. 16	·0943 ***					
13. 15	13. 0							
14. 0	24. 0	14. 56	·0950					
14. 45	12. 15 ***	15. 25	·0939 ***					
15. 34	10. 0	16. 57	·0961					
16. 15	11. 0	17. 35	·0942					
16. 51	15. 20	17. 43	·0928					
17. 1	21. 0 ***	17. 59	·0956					
		18. 20	·0970					
17. 21	23. 35	18. 46	·0960					
17. 45	13. 0	19. 29	·0955					
18. 25	8. 0 ***	19. 44	·0961 ***					
21. 0	8. 10	20. 33	·0949 ***					
23. 25	18. 20							
	(†)	20. 56	·0951					
		22. 15	·0934					
		23. 36	·0931					
		23. 59	·0938					
Mar. 12		Mar. 12		Mar. 12		Mar. 12		
	(†)	0. 0	·0938	0. 0	·02543	1. 0	45 ·8	45 ·5
0. 7	21. 18. 10	0. 47	·0944 ***	1. 35	·02510	3. 0	48 ·0	48 ·0
1. 55	23. 0			10. 47:	·01996	9. 0	49 ·0	49 ·7
2. 46	22. 0	1. 45	·0934 ***	17. 42	·02223	20. 0	43 ·0	43 ·0
4. 30:	17. 10			23. 36	·02450	21. 0	43 ·0	43 ·0
6. 10	17. 10	3. 11	·0932 ***	23. 59	·02431	22. 0	43 ·2	43 ·1
10. 15	14. 30					23. 0	43 ·9	43 ·6
15. 53	14. 0 ***	4. 7	·0938					
		5. 20	·0936					
20. 25	8. 55	6. 21	·0938					
22. 6	10. 45	6. 46	·0937					
23. 50	21. 35	7. 7	·0941					
23. 59	22. 0	7. 42	·0939					
		8. 5	·0945 ***					
		12. 43	·0948 ***					
		17. 36	·0961 ***					
		19. 6	·0957 ***					
		21. 45	·0932 ***					
		23. 8	·0923					
		23. 59	·0925					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

On March 9, from $10^h.\ 54^m$ to $11^h.\ 13^m$, and from $14^h.\ 10^m$ to $14^h.\ 30^m$, the trace of the Horizontal Force Magnet went off the sheet, in the direction of diminishing force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 13		Mar. 13		Mar. 13		Mar. 13		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 22. 0	0. 0	·0925	0. 0	·02431	0. 0	45 ·3	46 ·6
	***	2. 45	·0925	1. 56	·02400	1. 0	47 ·0	47 ·5
3. 30	24. 15		***	11. 0:	·01843	2. 0	48 ·2	48 ·9
5. 0	21. 0	5. 32	·0932	21. 43	·02566	3. 0	49 ·3	50 ·0
6. 35	18. 30	6. 29	·0940	22. 15	·02483	4. 0	50 ·0	50 ·0
7. 10	19. 0	6. 50	·0937	23. 59	·02400	6. 0	51 ·3	51 ·7
7. 30	14. 0	7. 17	·0943			9. 0	49 ·5	50 ·0
7. 42	15. 0	7. 26	·0937			12. 0	48 ·0	49 ·0
7. 54	11. 35		***			18. 0	41 ·2	43 ·2
8. 0	13. 30	7. 50	·0945			20. 0	40 ·2	42 ·1
8. 21	11. 0	8. 3	·0953			21. 14	41 ·0	43 ·0
9. 12	17. 10		***			22. 0	41 ·8	43 ·4
9. 45	15. 35	8. 46	·0940			23. 0	43 ·5	44 ·8
10. 53	16. 40		***					
	***	9. 37	·0940					
12. 17	13. 0	10. 13	·0945					
12. 40	9. 10	10. 45	·0943					
13. 0	10. 0		***					
13. 25	8. 30	12. 2	·0948					
14. 18	13. 30	12. 17	·0974					
14. 55	7. 15	12. 33	·0956					
16. 15	19. 0	13. 18	·0949					
16. 36	12. 30		***					
17. 7	11. 15	14. 5	·0951					
	***	14. 43	·0969					
18. 14	16. 35	14. 50	·0960					
18. 26	15. 0	15. 35	·0959					
	***		***					
19. 45	17. 30	16. 16	·0948					
	(†)	16. 40	·0973					
21. 14	21. 33*	16. 56	·0978					
	(†)	17. 43	·0950					
		18. 7	·0949					
		18. 17	·0958					
		18. 42	·0943					
			***					
		19. 43	·0952					
			***					
		20. 6	·0941					
			***					
		20. 50	·0947					
		21. 40	·0923					
		22. 5	·0931					
			***					
		22. 30	·0923					
			***					
		23. 16	·0937					
			(†)					
Mar. 14		Mar. 14		Mar. 14		Mar. 14		
	(†)		(†)	0. 0	·02400	0. 0	45 ·3	46 ·0
1. 0	21. 26. 0	1. 0	·0939*	1. 25	·02341	1. 0	47 ·3	47 ·2
2. 5	26. 0	1. 10	·0935	5. 28	·01713	3. 0	50 ·4	50 ·8
2. 15	32. 30	1. 40	·0937	7. 50	·01432	9. 0	52 ·0	52 ·5
	***	1. 51	·0928	12. 46	·01510	21. 0	48 ·3	49 ·8
3. 45	33. 0	2. 10	·0941	21. 47:	·01928			
4. 10	28. 5		***	22. 14	·01927			
4. 30	29. 0	3. 12	·0923	23. 59	·01845			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 14		Mar. 14						
h m	° ′ ″	h m		h m		h m	°	°
5. 5	21. 25. 40	3. 35	·0935					
6. 10	25. 30	3. 56	·0909					
6. 55	19. 0	4. 25	·0924					
8. 0:	20. 0	4. 50	·0924					
9. 35	13. 20	5. 21	·0934					
9. 53	3. 20	5. 46	·0925					
10. 5	9. 0	6. 3	·0929					
11. 0	14. 50	6. 19	·0913					
11. 40	16. 0	6. 58	·0937					
12. 25	14. 0		***					
13. 15	16. 0	8. 17	·0943					
14. 30	15. 0	8. 36	·0955					
15. 16	16. 35		***					
16. 20	14. 25	9. 43	·0944					
17. 15	15. 0	10. 2	·0961					
17. 34	13. 5		***					
	***	11. 6	·0951					
20. 45:	12. 10		***					
22. 50	23. 0	12. 26	·0961					
	***		***					
23. 59	25. 0	13. 22	·0958					
			***					
		18. 35	·0978					
			***					
		20. 25	·0967					
		21. 38	·0954					
			***					
		23. 42	·0915					
		23. 59	·0918					
Mar. 15		Mar. 15		Mar. 15		Mar. 15		
0. 0	21. 25. 0	0. 0	·0918	0. 0	·01845	1. 0	52 ·3	52 ·2
1. 14	24. 30	2. 43	·0924	2. 45	·01690	3. 0	54 ·6	54 ·5
1. 47	26. 0	3. 37	·0920	4. 20	·01491	9. 0	52 ·4	53 ·2
	***		***		***	21. 0	42 ·5	43 ·8
5. 0	23. 25	4. 46	·0924	7. 12	·01573			
	***	4. 56	·0904	8. 15	·01548			
8. 57	23. 0	5. 12	·0912	10. 0	·01592			
10. 0	16. 15	5. 25	·0909	12. 43	·01726			
10. 25	19. 30		***	16. 18	·02070			
	***	6. 17	·0912	20. 43:	·02573			
12. 24	22. 0		***	23. 0	·02414			
13. 0	21. 0	8. 50	·0930		(†)			
13. 54:	24. 10	9. 21	·0922					
14. 42	18. 35	9. 33	·0925					
15. 14	17. 0	9. 46	·0918					
15. 55	17. 25		***					
16. 30	15. 5	11. 40	·0930					
16. 55	18. 0		***					
17. 38	16. 5	12. 6	·0937					
18. 0	16. 30		***					
18. 15	18. 0	13. 12	·0942					
19. 15	14. 0	13. 47	·0938					
19. 25	15. 5		***					
19. 40	13. 0	15. 5	·0946					
20. 3	15. 0	15. 44	·0961					
20. 24	11. 50	16. 0	·0953					
20. 40	12. 30		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 15		Mar. 15						
h m	° ′ ″	h m		h m		h m	°	°
21. 20	21. 17. 20	16. 20	·0948					
21. 54	15. 0		***					
	***	18. 36	·0960					
22. 51	21. 30	19. 45	·0961					
	***	20. 56	·0937					
23. 20	21. 0	22. 2	·0935					
23. 59	24. 10		(†)					
Mar. 16		Mar. 16		Mar. 16		Mar. 16		
0. 0	21. 24. 0		(†)		(†)	1. 0	47 ·3	47 ·0
	***	0. 37	·0926	0. 40	·02313	3. 0	49 ·0	49 ·1
0. 22	24. 5		***	3. 30	·02171	9. 16	48 ·0	48 ·5
	***	1. 26	·0927	6. 0	·02000	20. 40	41 ·0	42 ·0
1. 3	21. 45	2. 18	·0941	10. 36:	·01932			
1. 40	22. 10	3. 7	·0943	16. 7	·02193			
	***	3. 36	·0949	19. 16	·02450			
5. 8	15. 40	4. 7	·0946	23. 59	·02300			
6. 30	16. 0		***					
7. 55	14. 40	7. 45	·0956					
9. 40	16. 0	8. 15	·0950					
14. 5	17. 35		***					
14. 55	14. 10	13. 20	·0956					
16. 25	15. 0	13. 49	·0966					
19. 20	13. 5	14. 42	·0965					
21. 0	11. 0	15. 40	·0959					
	***		***					
23. 59	15. 15	18. 55	·0972					
			***					
		22. 16	·0944					
		22. 30	·0937					
			***					
		23. 59	·0941					
Mar. 17		Mar. 17		Mar. 17		Mar. 17		
0. 0	21. 15. 20	0. 0	·0941	0. 0	·02300	9. 35	43 ·2	44 ·8
	***		***	1. 50	·02272	21. 0	39 ·5	40 ·6
1. 20	19. 0	0. 46	·0947	4. 43	·02291			
	***	1. 22	·0947	9. 45	·02183			
3. 35	18. 30	3. 15	·0961	13. 48	·02243			
4. 0	16. 40	3. 36	·0958	16. 19	·02329			
	***	4. 42	·0970	16. 50	·02310			
8. 51	12. 40	5. 18	·0970	19. 12	·02343			
9. 8	9. 10	5. 41	·0966		***			
9. 44	13. 5	6. 27	·0971	23. 17	·02131			
10. 20	12. 0		***	23. 59	·02082			
11. 15	14. 30	8. 36	·0967					
	***	8. 55	·0975					
13. 0	14. 40	9. 47	·0962					
13. 31	18. 15	10. 25	·0970					
14. 0	15. 35		***					
15. 10	14. 0	12. 36	·0973					
15. 50	14. 40	13. 12	·0978					
16. 27	12. 30	13. 40	·0972					
17. 3	14. 10	14. 28	·0979					
18. 30	14. 0	14. 46	·0973					
	***	15. 29	·0971					
19. 39	11. 0		***					
	***	16. 5	·0977					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 17		Mar. 17						
h m	° ′ ″	h m		h m		h m	°	°
20. 40	21. 11. 0	16. 46	·0970					
	***		***					
22. 8	16. 0	18. 55	·0976					
23. 59	30. 0		***					
		20. 20	·0961					
		21. 7	·0945					
			(†)					
Mar. 18		Mar. 18		Mar. 18		Mar. 18		
0. 0	21. 30. 0		(†)	0. 0	·02082	1. 0	44 ·7	44 ·8
	***	0. 29	·0938	2. 0	·01963	3. 0	47 ·8	47 ·8
1. 0	28. 0	0. 48	·0947	7. 0:	·01190	9. 0	48 ·5	49 ·5
1. 28	31. 10	0. 59	·0939	10. 17:	·01132	21. 0	45 ·6	46 ·8
2. 9	28. 0	1. 17	·0951	18. 20	·01536			
2. 25	29. 0	1. 38	·0935	22. 13	·01572			
2. 54	27. 35		***	23. 59	·01504			
3. 30	29. 5	2. 6	·0931					
	***		***					
6. 35	21. 30	2. 47	·0933					
14. 21	15. 30	3. 13	·0936					
14. 42	14. 0	3. 30	·0943					
15. 30	19. 0	4. 8	·0946					
16. 25	14. 15	4. 46	·0919					
	***	5. 50	·0937					
19. 40	10. 0		***					
19. 45	12. 5	8. 22	·0949					
20. 25	10. 30		***					
21. 52	13. 40	13. 36	·0957					
23. 15	22. 0		***					
23. 59	24. 0	14. 37	·0961					
		15. 5	·0957					
		15. 26	·0959					
		16. 7	·0971					
			***					
		17. 50	·0979					
			***					
		18. 48	·0969					
		19. 6	·0975					
		19. 33	·0968					
		19. 42	·0973					
			***					
		22. 40	·0933					
		23. 0	·0941					
		23. 42	·0927					
		23. 59	·0935					
Mar. 19		Mar. 19		Mar. 19		Mar. 19		
0. 0	21. 24. 10	0. 0	·0935	0. 0	·01504	1. 0	48 ·0	48 ·0
0. 44	26. 50	0. 6	·0942	1. 37	·01522	3. 0	51 ·0	51 ·3
1. 15	23. 30	0. 32	·0922	3. 12	·01366	9. 0	50 ·0	50 ·6
2. 0	26. 30	0. 50	·0908		***	20. 0	44 ·2	44 ·8
2. 30	25. 15	1. 32	·0929	6. 17	·01163	21. 10	44 ·8	45 ·5
3. 5	26. 0		***		***	22. 0	45 ·0	45 ·5
	***	3. 35	·0941	8. 6	·01192	23. 0	45 ·7	46 ·8
4. 0	24. 50	3. 47	·0939		***			
4. 40	19. 15	3. 58	·0946	8. 43	·01090			
4. 52	21. 30	4. 7	·0941		***			
5. 10	16. 0		***	9. 42	·01148			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Mar.19		Mar.19		Mar.19				
h m	° ′ ″	h m		h m		h m	°	°
5. 45	21. 20. 10	4. 45	·0950	13. 45	·01243			
6. 6	18. 0	5. 3	·0930	14. 15	·01199			
6. 46	18. 30	5. 42	·0934	19. 28	·01463			
7. 15	14. 0	6. 9	·0927	22. 45	·01642			
7. 47	11. 55	6. 37	·0936	23. 59	·01663			
8. 0	21. 0		***					
8. 16	9. 0	7. 36	·0933					
8. 24	13. 0	7. 49	·0960					
8. 35	8. 10	8. 8	·0935					
8. 50	20. 30	8. 18	·0954					
9. 10	8. 0	8. 29	·0931					
9. 25	13. 10	8. 40	·0957					
	***	8. 48	·0907					
11. 0	16. 0	9. 8	·0932					
12. 30	16. 0	9. 25	·0926					
12. 46	18. 10	9. 41	·0934					
13. 1	17. 30		***					
13. 28	24. 30	11. 5	·0946					
14. 6	11. 5	11. 59	·0944					
14. 16	13. 20		***					
	***	13. 0	·0948					
16. 50	12. 25	13. 23	·0963					
17. 40:	14. 50	13. 46	·0955					
19. 10	11. 0	14. 7	·0961					
20. 15	9. 35		***					
21. 52	13. 30	15. 6	·0946					
23. 5	19. 40	15. 34	·0954					
23. 20	21. 30	16. 9	·0947					
	***	16. 46	·0961					
23. 59	22. 0	17. 13	·0963					
		17. 37	·0952					
		18. 12	·0949					
			***					
		19. 36	·0953					
			***					
		21. 50	·0941					
		22. 17	·0948					
		23. 59	·0937					
Mar.20		Mar.20		Mar.20		Mar.20		
0. 0	21. 22. 0	0. 0	0937	0. 0	·01663	0. 0	46 ·0	47 ·3
0. 30	20. 20	0. 43	·0942	2. 6	·01770	1. 0	47 ·8	47 ·4
0. 48	23. 20	1. 10	·0936	6. 7	·01592	2. 0	48 ·5	48 ·2
1. 10	20. 0		***	7. 45	·01588	3. 0	49 ·0	48 ·8
1. 45	23. 5	1. 45	·0953	9. 46	·01486	4. 0	49 ·0	49 ·0
2. 10	22. 30	2. 16	·0941	12. 37:	·01380	6. 0	50 ·4	50 ·0
2. 33	24. 0	2. 20	·0947	15. 8	·01510	9. 0	50 ·0	50 ·0
3. 25	17. 30	2. 48	·0932	22. 0	·01918	12. 0	49 ·0	50 ·5
5. 52	15. 0		***	23. 59	·01910	18. 0	44 ·0	45 ·0
7. 10	11. 40	4. 40	·0945			20. 0	43 ·0	44 ·0
8. 10	13. 30	5. 5	·0945			21. 0	43 ·0	44 ·7
9. 25	13. 20		***			22. 0	44 ·2	44 ·8
10. 9	15. 15	6. 46	·0957			23. 0	45 ·0	45 ·0
10. 30	13. 10	7. 6	·0953					
12. 0	16. 0	8. 0	·0959					
15. 10	16. 30		***					
18. 15	14. 40	9. 56	·0952					
20. 10	11. 10	10. 40	·0956					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.20		Mar.20						
h m	° ′ ″	h m		h m		h m	°	°
22. 50	21. 27. 20	11. 46	·0951					
23. 59	29. 0		***					
		13. 38	·0953					
		16. 47	·0963					
			***					
		18. 48	·0964					
			***					
		19. 36	·0961					
			***					
		21. 34	·0933					
		21. 45	·0922					
			***					
		22. 13	·0917					
			***					
		23. 59	·0915					
Mar.21		Mar.21		Mar.21				
0. 0	21. 29. 0	0. 0	·0915	0. 0	·01910	0. 0	45 ·8	45 ·5
1. 25	33. 5		***	0. 41	·01922	1. 0	47 ·3	47 ·5
2. 30	32. 0	0. 47	·0907	5. 17	·01248	3. 0	51 ·0	50 ·6
	***	1. 56	·0910		·01283	9. 0	48 ·2	49 ·8
6. 17	23. 10		***	8. 50	·01242	21. 0	41 ·0	41 ·2
7. 45	25. 0	3. 7	·0925	11. 7	·01338			
11. 8	21. 0		***	22. 8:	·02200			
18. 5	15. 40	4. 6	·0923	23. 59	·02171			
18. 45	14. 15	5. 55	·0927					
19. 11	14. 55	6. 8	·0922					
20. 5	11. 5	6. 30	·0929					
21. 0	12. 30	6. 45	·0925					
22. 40	21. 0	7. 7	·0932					
23. 59	25. 40	7. 21	·0930					
		9. 12	·0941					
		10. 16	·0945					
		10. 47	·0951					
		11. 50	·0947					
		15. 36	·0955					
		18. 12	·0967					
		18. 43	·0966					
		18. 52	·0961					
		19. 36	·0962					
		21. 17	·0944					
		21. 20	·0947					
		21. 47	·0935					
			***					
		22. 50	·0926					
			***					
		23. 59	·0932					
Mar.22		Mar.22		Mar.22		Mar.22		
0. 0	21. 25. 45	0. 0	·0932	0. 0	·02171	1. 0	46 ·0	46 ·6
1. 0	27. 10	2. 45	·0928	1. 50	·02010	3. 0	49 ·8	50 ·2
2. 22	28. 15		***	10. 8:	·01158	9. 0	52 ·0	52 ·2
3. 55	25. 30	3. 34	·0933	17. 33	·01566	21. 0	47 ·0	47 ·7
	***	3. 47	·0928	20. 45:	·01772			
10. 45	19. 0		***	23. 59	·01776			
11. 8	13. 0	5. 3	·0933					
11. 40	15. 10	5. 40	·0930					
11. 58	12. 0		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.22		Mar.22						
h m	° ′ ″	h m		h m		h m	°	°
12. 17	21. 15. 30	6. 43	·0937					
			***					
12. 38	14. 25							
14. 0:	18. 30	9. 20	·0941					
	***	10. 21	·0949					
18. 25	13. 30	10. 42	·0946					
			***					
18. 40	12. 0							
19. 0	12. 0	11. 6	·0957					
			***					
19. 25	10. 5							
19. 41	11. 25	12. 15	·0936					
20. 10	9. 0	12. 46	·0952					
21. 24	11. 40	13. 7	·0943					
			***					
23. 51	23. 45							
	(†)	15. 3	·0947					
			***					
		15. 47	·0957					
		16. 8	·0954					
			***					
		17. 36	·0956					
		19. 0	·0961					
		19. 32	·0968					
		20. 3	·0957					
		20. 22	·0958					
		21. 20	·0946					
		21. 36	·0952					
			***					
		22. 30	·0931					
		22. 47	·0937					
		23. 15	·0926					
		23. 34	·0931					
		23. 59	·0927					
Mar.23		Mar.23		Mar.23		Mar.23		
	(†)	0. 0	·0927	0. 0	·01776	1. 0	51 ·5	51 ·6
0. 15	21. 25. 0	1. 17	·0929	1. 36	·01690	3. 0	54 ·2	54 ·0
	***	1. 50	·0929		***	9. 0	54 ·3	54 ·6
4. 0	21. 0		(†)	6. 20	·01213	21. 31	48 ·0	48 ·3
4. 25	22. 0	3. 0	·0931*	8. 7	·01357			
4. 46	18. 0	3. 47	·0939	15. 43	·01485			
5. 28	20. 30	4. 3	·0946	21. 0	·01890			
	***	4. 11	·0941	23. 59	·02006			
6. 50	17. 25	4. 18	·0951					
7. 22	10. 20	4. 23	·0941					
7. 46	18. 0	4. 41	·0947					
8. 4	15. 30	4. 49	·0959					
	(†)	5. 13	·0929					
9. 0	18. 28*	5. 26	·0941					
10. 57	17. 0	5. 37	·0934					
11. 20	11. 0	6. 2	·0959					
11. 40	7. 40	6. 17	·0946					
12. 15	8. 20	6. 36	·0934					
12. 30	12. 50		***					
13. 20	15. 0	7. 40	·0930					
14. 21	8. 0	8. 5	·0954					
15. 14	16. 50	8. 19	·0934					
15. 50	12. 30	8. 37	·0939					
	***	8. 46	·0936					
20. 0	13. 0		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.23		Mar.23						
h m	° ′ ″	h m		h m		h m	°	°
20. 28	21. 11. 0	11. 27	·0939					
22. 15	19. 0	11. 46	·0944					
23. 59	23. 0	12. 56	·0929					
		13. 22	·0944					
		13. 50	·0940					
		14. 15	·0943					
		14. 22	·0952					
		14. 51	·0935					
		15. 9	·0939					
		15. 30	·0955					
			***					
		16. 20	·0949					
		16. 42	·0953					
		17. 17	·0948					
		17. 46	·0955					
		18. 36	·0947					
		19. 3	·0954					
			***					
		21. 40	·0933					
		22. 13	·0934					
		23. 20	·0922					
		23. 59	·0928					
Mar.24		Mar.24		Mar.24		Mar.24		
0. 0	21. 23. 0	0. 0	·0928	0. 0	·02006	8. 34	56 ·3	56 ·1
1. 25:	25. 0		***	1. 35	·01972	21. 0	49 ·8	51 ·3
4. 0	21. 40	2. 36	·0935	7. 5	·01362			
11. 35	17. 0		***		***			
12. 43	13. 0	4. 37	·0930	16. 45	·01643			
13. 2	13. 30		***	23. 59	·02043			
13. 45	12. 25	7. 5	·0947					
14. 30	14. 0	8. 36	·0944					
15. 0	19. 30	8. 56	·0947					
15. 24	16. 50	9. 37	·0943					
16. 51	13. 20		***					
17. 31	15. 15	10. 18	·0947					
18. 15	12. 35	10. 36	·0943					
	***	11. 17	·0952					
19. 20	12. 30	11. 46	·0947					
19. 40	10. 50		***					
	***	12. 47	·0958					
23. 59	25. 30	13. 18	·0945					
		14. 16	·0948					
			***					
		14. 50	·0942					
		15. 17	·0955					
			***					
		16. 18	·0962					
			***					
		17. 59	·0960					
			***					
		19. 37	·0942					
		20. 6	·0944					
		21. 22	·0927					
		21. 41	·0929					
		21. 58	·0920					
		22. 55	·0928					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar.24 h m		h m		h m	°	°
		23. 17	·0935 ***					
		23. 59	·0934					
Mar.25		Mar.25		Mar.25		Mar.25		
0. 0	21. 25. 30	0. 0	·0934 ***	0. 0	·02043	1. 0	51 ·3	52 ·2
1. 0	27. 0			3. 25	·02149	3. 0	52 ·6	52 ·7
1. 14	25. 5	1. 36	·0945 ***	4. 28	·02146	9. 0	50 ·6	51 ·0
1. 45	28. 0			5. 37	·02170	21. 0	48 ·3	49 ·0
2. 52	24. 20	2. 40	·0936	6. 13	2161			
3. 34	26. 0	3. 7	·0943	6. 27	·02100			
4. 8	23. 30	3. 15	·0940	6. 45	·02137			
4. 40	22. 10	3. 38	·0949	7. 6	·02106			
4. 55	24. 30	3. 45	·0945		***			
5. 30	15. 10	3. 49	·0950	7. 45	·02095			
5. 45	14. 0	4. 1	·0942	9. 42 :	·02150			
5. 58	15. 30	4. 15	·0950	11. 6	·02067			
6. 5	11. 15	4. 29	·0947		***			
6. 16	21. 0	4. 47	·0958	15. 38	·02303			
6. 32	2. 0	5. 6	·0949	17. 10	·02341			
6. 55	13. 0	5. 18	·0945	20. 8	·02463			
7. 6	9. 5	5. 42	·0961	23. 59	·02540			
7. 23	9. 10	5. 46	·0954					
7. 44	15. 0		(†)					
7. 57	12. 30	6. 47	·0969					
8. 44	16. 35	7. 5	·0939					
9. 16	0. 30	7. 36	·0960					
9. 44	11. 0	7. 53	·0933					
10. 4	13. 30	8. 12	·0941					
10. 23	11. 0	8. 35	·0935					
10. 33	16. 0	8. 41	·0940					
10. 51	17. 5	8. 58	·0928					
11. 6	10. 30	9. 40	·0946					
11. 20	7. 40	9. 49	·0933					
11. 38	11. 0	10. 11	·0942					
11. 52	8. 30	10. 36	·0975					
12. 50	12. 0	10. 46	·0963					
13. 41	9. 30	11. 6	·0941					
14. 16	4. 10 ***	11. 15	·0931					
		11. 26	·0945					
15. 50	9. 30	11. 38	·0956					
16. 17	7. 0 ***	11. 50	·0941					
		12. 36	·0953					
17. 54	15. 0	12. 49	·0945					
18. 25	11. 0	13. 35	·0954 ***					
18. 46	15. 0							
19. 10	12. 0 ***	14. 17	·0944					
		15. 13	·0952					
20. 40	13. 45	15. 47	·0965					
21. 0	14. 40	16. 11	·0959					
22. 0	19. 30 ***	16. 45	·0961					
		17. 5	·0957					
23. 59	25. 0	17. 50	·0960					
		18. 3	·0949 ***					
		18. 41	·0953 ***					
		19. 40	·0943					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar.25 h m		h m		h m	°	°
		19. 46	·0937 ***					
		20. 35	·0941					
		20. 47	·0934					
		21. 30	·0937					
		21. 46	·0928					
		22. 0	·0933					
		22. 17	·0929 ***					
		23. 25	·0930					
		23. 43	·0939					
		23. 59	·0932					
Mar.26		Mar.26		Mar.26		Mar.26		
0. 0	21. 25. 0	0. 0	·0932	0. 0	·02540	1. 0	51 ·0	51 ·0
1. 10	19. 0 ***		(†)		***	3. 0	53 ·4	53 ·7
		1. 0	·0936*	1. 50	·02538	9. 0	53 ·5	53 ·5
1. 50	20. 35	3. 0	·0947*	7. 34	·01983	20. 0	49 ·0	50 ·0
2. 10	19. 0 ***	4. 45	·0936	10. 15	·02035	21. 0	49 ·6	50 ·3
		5. 2	·0949		***	22. 0	50 ·7	50 ·8
3. 45 :	17. 45 ***	5. 17	·0935	10. 48	·01977	23. 0	52 ·0	52 ·0
		5. 26	·0945		***			
5. 25	5. 30	5. 49	·0953	11. 45	·01998			
5. 44	5. 30	6. 15	·0943	16. 6	·02223			
6. 40	11. 0	6. 26	·0945	19. 37	·02443			
6. 55	9. 5	6. 49	·0934	21. 45	·02530			
7. 37	11. 30	7. 11	·0944 ***	23. 59	·02510			
7. 48	10. 0							
8. 10	12. 40	8. 7	·0940					
8. 29	10. 0	8. 18	·0932					
8. 40	11. 55	8. 37	·0936					
9. 15	9. 0	8. 50	·0925					
9. 30	6. 15	9. 10	·0936					
9. 48	8. 0	9. 18	·0923 ***					
12. 42	5. 15							
13. 55	7. 45	9. 52	·0932					
14. 30	4. 0	10. 9	·0967 ***					
15. 13	6. 5							
15. 46	10. 15	10. 35	·0957					
17. 27	4. 0	10. 48	·0934					
17. 55	5. 0	11. 20	·0955					
18. 6	4. 0	11. 45	·0938					
18. 30	5. 20 ***	12. 8	·0952					
		12. 36	·0955					
19. 40	2. 30	12. 45	·0949					
20. 0	4. 0 ***	13. 20	·0954 ***					
20. 30	2. 40 ***	15. 15	·0950					
		15. 36	·0959 ***					
23. 45	15. 0							
23. 59	14. 0	16. 30	·0951 ***					
		17. 8	·0962 ***					
		19. 45	·0943					
		20. 0	·0946					
		20. 37	·0935					
		20. 46	·0938 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Mar. 26 h m		h m		h m	°	°
		21. 47	·0926					
			***					
		23. 59	·0918					
Mar. 27		Mar. 27		Mar. 27		Mar. 27		
0. 0	21. 14. 0	0. 0	·0918	0. 0	·02510	0. 0	53·0	52·7
1. 0	14. 30	0. 36	·0922	4. 45	·01947	1. 0	54·0	53·6
1. 30	17. 0	0. 47	·0912		***	2. 0	54·8	54·6
	***		***	12. 12	·01622	3. 0	56·0	55·5
3. 10	11. 30	1. 42	·0925	19. 6	·01857	4. 0	56·0	55·0
4. 15	12. 15		***	23. 59	·01930	6. 0	56·3	55·7
6. 25	21. 7. 35	2. 45	·0929			9. 0	56·2	56·0
7. 0	20. 58. 35	3. 2	·0924			12. 0	55·0	56·1
7. 50	21. 6. 40		***			18. 0	53·0	54·6
8. 15	6. 0	3. 20	·0934			21. 0	52·5	53·6
9. 7	8. 0		***			22. 0	53·0	53·3
	***	3. 57	·0935			23. 0	53·7	53·8
10. 24	9. 0		***					
10. 30	4. 30	4. 34	·0927					
10. 41	1. 0		***					
10. 57	5. 0	5. 47	·0936					
11. 24	1. 0		***					
12. 10	3. 0	6. 33	·0933					
13. 1	0. 30	6. 45	·0923					
13. 25	4. 0	7. 13	·0944					
	***	7. 37	·0935					
14. 10	4. 25	7. 46	·0940					
14. 55	1. 0	7. 55	·0935					
15. 53	6. 25		***					
16. 23	3. 30	9. 25	·0938					
17. 7	5. 30	9. 38	·0943					
17. 40	9. 0	9. 47	·0940					
18. 15:	6. 10	10. 8	·0944					
	***	10. 19	·0938					
18. 58	9. 0	10. 43	·0957					
19. 15	5. 50	10. 47	·0952					
19. 23	6. 30	11. 3	·0960					
19. 50	2. 0	11. 20	·0950					
20. 10	4. 0	11. 40	·0957					
21. 0:	4. 0		***					
21. 53	8. 0	12. 33	·0939					
22. 10	7. 0	12. 50	·0945					
	***	13. 18	·0942					
23. 59	17. 35		***					
		14. 46	·0955					
		15. 8	·0948					
		16. 36	·0956					
		17. 9	·0953					
		17. 30	·0959					
			***					
		19. 8	·0950					
		19. 18	·0953					
		19. 38	·0942					
		19. 55	·0946					
		21. 26	·0925					
		21. 37	·0926					
		22. 4	·0908					
		22. 42	·0921					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Mar. 27 h m		h m		h m	°	°
		23. 8	·0906					
			***					
		23. 59	·0908					
Mar. 28		Mar. 28		Mar. 28		Mar. 28		
0. 0	21. 17. 15	0. 0	·0908	0. 0	·01930	0. 0	53·8	54·0
1. 0	21. 0	0. 46	·0923	2. 45	·01902	1. 0	54·0	54·5
1. 40	20. 0	1. 35	·0918	9. 52:	·01476	2. 0	55·0	55·3
2. 0	17. 30		***	15. 7	·01802	3. 0	55·8	56·2
2. 31	16. 10	3. 9	·0929	19. 15:	·02283	9. 0	55·5	56·0
2. 45	18. 0	3. 20	·0923	22. 36	·02472	21. 35	47·2	48·5
3. 15	17. 30		***	23. 59	·02443			
	***	4. 18	·0935					
4. 5	8. 0	4. 45	·0930					
	***	5. 9	·0931					
5. 56	9. 10	5. 20	·0925					
7. 25	5. 0	5. 46	·0931					
8. 6	0. 0	6. 8	·0926					
9. 15	7. 0		***					
9. 30	5. 35	7. 33	·0931					
10. 25	8. 30		***					
12. 15	9. 45	8. 15	·0945					
13. 45	8. 0		***					
13. 58	10. 10	9. 29	·0935					
14. 15	9. 0		***					
14. 30	13. 0	14. 2	·0953					
15. 15	7. 0	14. 45	·0960					
16. 20	9. 0	15. 47	·0950					
	***	16. 38	·0958					
17. 50	8. 5	18. 19	·0963					
	***	19. 46	·0957					
19. 50	2. 0	20. 26	·0945					
	***	22. 17	·0924					
22. 0	7. 10	22. 35	·0926					
23. 59	17. 45	23. 2	·0921					
		23. 46	·0925					
		23. 59	·0932					
Mar. 29		Mar. 29		Mar. 29		Mar. 29		
0. 0	21. 17. 50	0. 0	·0932	0. 0	·02443	10. 0	52·7	52·0
1. 35	22. 30	0. 51	·0925	3. 46	·02360	21. 0	48·0	49·0
3. 34	9. 0	2. 17	·0941	11. 13:	·01950			
6. 20	9. 0	3. 36	·0942	19. 6	·02362			
7. 6	6. 30	4. 38	·0953	21. 5	·02430			
7. 26	2. 30	5. 0	·0953		***			
7. 55	5. 40	5. 9	·0945	23. 17	·02381			
	***	5. 26	·0951	23. 59	·02381			
11. 55	6. 40		***					
12. 55	4. 40	7. 8	·0946					
14. 0	11. 20		***					
	***	7. 45	·0960					
15. 45	7. 50		***					
17. 46	8. 0	8. 37	·0950					
19. 40	0. 0		***					
20. 5	1. 20	10. 28	·0954					
20. 54:	1. 10		***					
	***	12. 17	·0958					
23. 59	15. 40	13. 35:	·0955					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar.29 h m		h m		h m	°	°
		14. 26	·0961 ***					
		15. 52	·0966 ***					
		17. 7	·0963					
		17. 39	·0967					
		19. 46	·0964					
		21. 48	·0936					
		23. 37	·0927					
		23. 59	·0929					
Mar.30		Mar.30		Mar.30		Mar.30		
0. 0	21. 15. 45	0. 0	·0929	0. 0	·02381	1. 0	50 ·0	49 ·6
2. 14	17. 50	1. 37	·0929 ***	2. 56	·02350	3. 0	51 ·8	51 ·0
3. 16	18. 0 ***	4. 29	·0944 ***	12. 7	·02017	9. 0	52 ·5	51 ·1
6. 5	9. 40			20. 36	·02276	22. 33	48 ·5	49 ·0
8. 5	9. 0	6. 35	·0941	23. 59	·02360			
8. 45	6. 50	7. 18	·0949 ***					
9. 42	9. 0 ***	10. 37	·0951 ***					
13. 14	9. 30							
14. 0	8. 10	13. 16	·0955					
14. 42	6. 0 ***	14. 17	·0965					
		15. 35	·0958					
17. 30	5. 0	15. 51	·0959					
18. 30:	6. 30	16. 12	·0956					
20. 0	8. 45	17. 37	·0963					
22. 0	8. 30	20. 16	·0960					
23. 59	11. 30	22. 27	·0941					
		23. 3	·0940					
		23. 20	·0932					
		23. 59	·0932					
Mar.31		Mar.31		Mar.31		Mar.31		
0. 0	21. 11. 30	0. 0	·0932	0. 0	·02360	8. 0	53 ·0	53 ·4
0. 36	17. 0	0. 30	·0938	1. 47	·02413	21. 0	44 ·5	46 ·0
0. 55	21. 0	0. 45	·0926	3. 36:	·02382			
1. 35	22. 10	1. 11	·0939	10. 45:	·02068			
2. 2	20. 0	1. 46	·0943	18. 7	·02410 ***			
2. 31	23. 0	2. 3	·0937					
3. 5	17. 0	2. 25	·0937	20. 5	{ ·02472			
3. 50	17. 0	2. 42	·0948		{ ·02406			
4. 4	15. 10 ***	2. 50	·0943 ***	22. 36	{ ·02331			
					{ ·02164			
4. 45	15. 0 ***	3. 45	·0957 ***	23. 32	·02142 (†)			
5. 44	8. 50 ***	4. 37	·0949					
		5. 5	·0954					
8. 34	7. 0	5. 16	·0945					
12. 15	7. 15 ***	5. 35	·0951					
		5. 46	·0945					
17. 30	9. 35	6. 6	·0959					
18. 40	5. 55 ***	6. 17	·0953 ***					
20. 15	2. 30 ***	7. 33	·0955 ***					
21. 24	4. 0	8. 46	·0964					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.31 h m	° ′ ″	Mar.31 h m		h m		h m	°	°
23. 23	21. 13. 0	9. 2	·0954					
23. 59	16. 50	9. 21	·0959 ***					
		12. 18	·0958 ***					
		16. 37	·0973					
		17. 5	·0978 ***					
		18. 53	·0976 ***					
		22. 30	·0941					
		23. 20	·0938					
		23. 39	·0944					
		23. 59	·0937					
Apr. 1		Apr. 1		Apr. 1		Apr. 1		
0. 0	21. 16. 50	0. 0	·0937		(†)	1. 0	48 ·2	49 ·6
1. 35:	17. 0 ***	1. 37	·0939	1. 0	·01930	3. 0	51 ·2	51 ·8
		2. 46	·0945 ***	3. 6:	·01873	9. 0	52 ·5	53 ·0
3. 10	14. 15			7. 30	·01565	21. 0	47 ·0	47 ·2
6. 30	6. 40	3. 26	·0943	10. 41:	·01522			
7. 10	6. 30 ***	4. 15	·0954	18. 17	·01873			
		5. 37	·0951	21. 15	·02002			
8. 50	9. 0	6. 29	·0961	23. 59	·01920			
12. 45	7. 0 ***	7. 6	·0952					
		7. 47	·0959					
16. 25	6. 20	8. 8	·0959					
16. 55	8. 5	8. 21	·0966 ***					
18. 8	7. 10 ***	9. 50	·0963 ***					
20. 0	3. 0							
20. 25	0. 40	15. 47	·0966					
21. 5	0. 0 ***	16. 16	·0971					
		16. 47	·0968					
22. 50	10. 0 (†)	17. 45	·0974					
		18. 16	·0970					
		18. 43	·0973 ***					
		20. 40	·0957 ***					
		22. 37	·0931 ***					
		23. 59	·0931					
Apr. 2		Apr. 2		Apr. 2		Apr. 2		
	(†)	0. 0	·0931	0. 0	·01920	1. 0	50 ·8	51 ·4
1. 0	21. 15. 58*	2. 7	·0930	1. 27	·01862	3. 0	52 ·6	52 ·7
3. 0	13. 1*	3. 2	·0934	7. 0	·01350	9. 0	53 ·3	53 ·6
3. 30	2. 35	3. 15	·0926	10. 0:	·01290	20. 0	48 ·5	49 ·5
5. 45	8. 0	3. 48	·0935 ***	18. 36	·01542	21. 0	48 ·4	49 ·8
7. 24	7. 0			22. 43	·01657	22. 0	49 ·3	50 ·1
7. 53	5. 30	5. 45	·0946 ***	23. 59	·01620	23. 0	50 ·2	50 ·7
8. 45	6. 50							
9. 6	4. 0	6. 29	·0945 ***					
9. 55:	7. 30							
10. 50	6. 0	10. 17	·0958					
11. 46	7. 30	10. 42	·0953 ***					
12. 30	6. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 2		Apr. 2						
h m	° ′ ″	h m		h m		h m	°	°
14. 25	21. 5. 0	12. 7	·0958					
15. 15	6. 20	12. 22	·0953					
15. 44	4. 50	13. 7	·0960					
16. 29	6. 0		***					
17. 25	21. 5. 5	16. 26	·0964					
20. 15:	20. 58. 55	17. 45:	·0967					
23. 59	21. 15. 10	19. 39	·0959					
		22. 8	·0931					
			***					
		23. 59	·0925					
Apr. 3		Apr. 3		Apr. 3		Apr. 3		
0. 0	21. 15. 15	0. 0	·0925	0. 0	·01620	0. 0	51 ·3	51 ·7
1. 40:	17. 35	1. 8	·0928	1. 37	·01586	1. 0	53 ·0	52 ·9
5. 30:	7. 0		***	4. 40	·01150	2. 0	53 ·8	53 ·8
6. 55	6. 0	2. 59	·0925	5. 26	·01115	3. 0	54 ·5	54 ·8
9. 0	7. 5		***	7. 5	·01210	4. 0	55 ·0	55 ·0
14. 0	21. 6. 55	6. 22	·0943	22. 47	·01992	6. 0	55 ·6	56 ·1
	(†)	7. 5	·0952	23. 59	·01973	9. 0	54 ·3	54 ·5
21. 4	20. 59. 0	7. 47	·0949			12. 0	53 ·0	53 ·1
23. 59	21. 12. 0		***			18. 0	47 ·7	48 ·2
		14. 45	·0964			20. 0	48 ·0	48 ·0
			(†)			21. 0	48 ·0	48 ·3
		21. 0	·0948*			22. 0	49 ·0	49 ·0
		21. 4	·0955			23. 0	49 ·6	49 ·6
			***					
		23. 5	·0935					
			***					
		23. 59	·0935					
Apr. 4		Apr. 4		Apr. 4		Apr. 4		
0. 0	21. 12. 0	0. 0	·0935	0. 0	·01973	0. 0	50 ·3	50 ·7
1. 25	15. 0	1. 22	·0935	2. 5	·01850	1. 0	51 ·7	51 ·8
3. 10	13. 0	1. 50	·0931	5. 13	·01293	3. 0	54 ·0	54 ·9
4. 55	9. 0		***		***	9. 0	55 ·0	55 ·7
6. 15	6. 35	3. 35	·0934	7. 15	·01250	21. 0	47 ·4	48 ·2
8. 49	6. 0		***		***			
13. 15	9. 25	6. 15	·0947	11. 48	·01328			
14. 0	7. 35	7. 28	·0947	16. 56	·01672			
15. 9	6. 45		***		***			
15. 16	11. 30	11. 45	·0957	21. 45	·02107			
15. 45	8. 0	11. 56	·0961		***			
16. 10	12. 35	12. 22	·0955	23. 8	·02150			
16. 20	11. 0	13. 32	·0962	23. 59	·02133			
16. 46	8. 0		***					
17. 8	8. 35	15. 7	·0966					
	***	15. 19	·0982					
18. 40	3. 15	15. 31	·0976					
19. 5	21. 6. 0	15. 35	·0982					
19. 40	20. 54. 35		***					
19. 48	21. 1. 30	16. 12	·0969					
20. 5	20. 53. 30	16. 41	·0988					
20. 21	59. 35		***					
20. 30	20. 56. 0	18. 15	·0983					
20. 44	21. 1. 0	18. 44	·0991					
21. 15	20. 59. 0	19. 40	·0972					
	***	19. 45	·0983					
22. 24	21. 4. 40	20. 7	·0962					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 4		Apr. 4						
h m	° ′ ″	h m		h m		h m	°	°
23. 9	21. 14. 30	20. 18	·0971					
23. 44	12. 35	20. 33	·0955					
23. 59	14. 0	20. 45	·0961					
		23. 0	·0939					
		23. 8	·0927					
		23. 37	·0915					
			(†)					
Apr. 5		Apr. 5		Apr. 5		Apr. 5		
0. 0	21. 14. 5		(†)	0. 0	·02133	1. 0	51 ·5	51 ·4
0. 35	18. 0	1. 0	·0923*	2. 12	·02068	3. 0	53 ·8	54 ·2
	***	1. 33	·0934	7. 0	·01680	9. 0	54 ·4	54 ·5
2. 6	16. 40	2. 6	·0942	10. 26:	·01552	21. 0	45 ·3	46 ·4
2. 30	13. 35	2. 17	·0935	21. 35	·02310			
	***		***	23. 59	·02204			
4. 45	10. 5	2. 46	·0941					
	***	3. 19	·0935					
5. 15	6. 0		***					
5. 44	4. 30	5. 6	·0952					
	***		***					
6. 40	7. 15	7. 13	·0956					
7. 15	7. 0	7. 37	·0964					
	***		***					
9. 0	10. 0	8. 16	·0962					
9. 40	2. 10		***					
10. 11	9. 35	9. 29	·0971					
10. 40	5. 0	9. 46	·0985					
	***	10. 20	·0950					
12. 45	9. 25	10. 46	·0959					
	***		***					
15. 10	8. 30	14. 11	·0961					
	***		***					
17. 45	5. 45	18. 15	·0979					
18. 15	21. 3. 10		(†)					
	(†)	21. 0	·0958*					
21. 7	20. 59. 30	21. 16	·0961					
21. 35	21. 0. 30		***					
23. 59	13. 50	22. 50	·0943					
		23. 59	·0945					
Apr. 6		Apr. 6		Apr. 6		Apr. 6		
0. 0	21. 14. 0	0. 0	·0945	0. 0	·02204	1. 0	49 ·0	49 ·8
0. 50	15. 45	0. 15	·0939	3. 15	·02002	3. 0	52 ·4	52 ·6
1. 45	14. 0	2. 13	·0946		·01476	9. 0	53 ·4	53 ·0
2. 10	15. 0	2. 46	·0941	7. 30	·01125	21. 3	47 ·6	48 ·7
6. 0:	6. 40		***	10. 0:	·01134			
11. 55	8. 0	5. 9	·0956	19. 26	·01547			
13. 45	8. 0		***	23. 59	·01652			
14. 55	5. 10	7. 47	·0961					
16. 30	5. 35		***					
16. 45	3. 30	13. 42	·0966					
18. 8	4. 30	13. 56	·0975					
18. 40	21. 2. 0		***					
19. 9	20. 57. 30	15. 13	·0973					
19. 26	21. 1. 40	15. 35	·0976					
20. 20	20. 59. 30	15. 47	·0976					
21. 15	21. 1. 0	16. 12	·0970					
23. 30	14. 0		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (of H. F. Magnet.)	Readings of Thermometers. (of V. F. Magnet.)
Apr. 6		Apr. 6						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	21. 14. 35	17. 11	·0976					
		17. 46	·0974 ***					
		18. 47	·0959					
		19. 8	·0964					
		19. 46	·0963 ***					
		21. 25	·0947 ***					
		23. 59	·0942					
Apr. 7		Apr. 7		Apr. 7		Apr. 7		
0. 0	21. 14. 40	0. 0	·0942	0. 0	·01652	9. 0	51 ·0	52 ·0
1. 0:	16. 10	0. 39	·0950 ***	2. 29	·01682	21. 0	45 ·1	45 ·2
5. 43	6. 0			6. 45	·01100			
6. 6	7. 5	4. 20	·0961	10. 47:	·01380			
7. 54	1. 30	4. 37	·0966	18. 46	·01845			
8. 30	7. 0	5. 5	·0958 ***	23. 59	·01711			
9. 0	5. 0							
9. 27	11. 10	6. 4	·0970					
10. 45	1. 35	6. 45:	·0983					
11. 20	6. 0	7. 6	·0975					
11. 41	5. 5	7. 18	·0975 ***					
12. 54	8. 0							
14. 50	8. 10	7. 50	·0963					
17. 40	5. 0	8. 17	·0968					
18. 16	1. 25	8. 46	·0953					
19. 2	21. 0. 30	9. 7	·0955					
19. 24	20. 58. 35	9. 26	·0968					
20. 35	21. 0. 0	9. 47	·0938					
22. 10	7. 0 ***	10. 8	·0966					
		10. 37	·0952					
23. 59	17. 35	11. 9	·0966					
		11. 34	·0962					
		11. 47	·0966					
		13. 3	·0963					
		16. 59	·0976					
		18. 8	·0977					
		18. 26	·0975					
		18. 42	·0980 ***					
		19. 43	·0968					
		21. 50	·0948 ***					
		22. 55	·0942					
		23. 46	·0935 (†)					
Apr. 8		Apr. 8		Apr. 8		Apr. 8		
0. 0	21. 17. 35		(†)	0. 0	·01711	1. 0	50 ·3	50 ·2
0. 50	17. 30 ***	1. 0	·0942*	9. 0:	·01070	3. 0	52 ·7	52 ·8
		2. 30	·0940 ***	14. 46	·01253	9. 0	52 ·0	52 ·3
1. 6	20. 0			15. 15	·01220	21. 0	45 ·0	45 ·0
1. 40	17. 10	3. 47	·0946	21. 45:	{·01825			
1. 56	18. 20	4. 17	·0952		{·01795			
2. 50	18. 0 ***	4. 40	·0962 ***	23. 59	·01580			
4. 52	12. 10	4. 56	·0959					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (of H. F. Magnet.)	Readings of Thermometers. (of V. F. Magnet.)
Apr. 8		Apr. 8						
h m	° ′ ″	h m		h m		h m	°	°
5. 41	21. 6. 30	5. 30	·0944					
6. 52	7. 50	6. 18	·0955					
7. 25	5. 45	7. 6	·0958					
8. 0	7. 10	7. 26	·0950					
8. 55	8. 0	7. 45	·0948					
9. 45	4. 15	8. 16	·0955					
10. 5	6. 0	8. 31	·0949 ***					
10. 50	2. 5							
11. 4	5. 35	9. 4	·0962 ***					
11. 27	0. 30							
11. 41	21. 3. 40	9. 47	·0954					
12. 0	20. 58. 5	10. 12	·0959 ***					
12. 10	20. 57. 40							
13. 25	21. 1. 10	10. 47	·0954					
14. 4	20. 58. 30	11. 0	·0966					
14. 40	21. 12. 35	11. 15	·0947					
15. 8	20. 58. 20	11. 47	·0963					
15. 36	20. 58. 0	12. 2	·0960					
16. 55:	21. 6. 0 ***	12. 21	·0971					
		12. 46	·0955 ***					
19. 40	0. 0 ***	14. 4	·0973 ***					
20. 42	0. 30 ***	14. 45	·0961					
23. 59	13. 35	15. 2	·0962					
		15. 26	·0979 ***					
		16. 35	·0958 ***					
		18. 19	·0967					
		19. 50	·0957					
		22. 9	·0927					
		23. 12	·0925					
		23. 59	·0928					
Apr. 9		Apr. 9		Apr. 9		Apr. 9		
0. 0	21. 13. 40 ***	0. 0	·0928	0. 0	·01580	1. 0	50 ·3	50 ·2
		1. 8	·0937	1. 35	·01523	3. 0	53 ·0	53 ·0
1. 0	15. 10	1. 35	·0934	6. 30	·00986 ***	9. 0	52 ·7	52 ·8
1. 50	15. 30	1. 46	·0939			21. 0	45 ·7	46 ·5
5. 30:	7. 0	2. 37	·0934	16. 26	·01365	22. 0	47 ·0	47 ·2
7. 30	7. 0	5. 3	·0946	21. 45:	·01750	23. 0	48 ·3	48 ·1
8. 0	5. 45	5. 17	·0943	23. 59	·01682			
8. 25	8. 0	8. 22	·0956					
9. 10	21. 6. 0	8. 39	·0952					
10. 0	20. 58. 35 ***	9. 12	·0956 ***					
11. 15	21. 2. 35	10. 26	·0944					
11. 27	1. 10	10. 56	·0945					
12. 0	4. 0	11. 20	·0961					
13. 47	6. 25	11. 42	·0952 ***					
14. 20	2. 0							
15. 0	1. 0	12. 48	·0956					
16. 35	4. 5	13. 46	·0972 ***					
17. 0	4. 0							
18. 7:	5. 10	15. 12	·0963					
20. 5	0. 0	15. 26	·0968					
20. 50	1. 35	15. 45	·0963					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 9		Apr. 9						
h m	° ′ ″	h m		h m		h m	°	°
23. 45	21. 14. 30	17. 5	·0967					
23. 59	14. 35	17. 45	·0963					
		18. 17	·0971					
		18. 26	·0967					
		18. 40	·0971					
		18. 49	·0965					
		19. 20	·0971					
		20. 39	·0961					
		22. 4	·0940					
		23. 59	·0943					
Apr. 10		Apr. 10		Apr. 10		Apr. 10		
0. 0	21. 14. 35	0. 0	·0943	0. 0	·01682	0. 0	49·2	49·0
1. 15	14. 30	2. 46	·0947	2. 6	·01563	1. 0	51·7	51·6
6. 35:	5. 30		***	4. 40	·01010	2. 0	53·6	53·6
8. 40	4. 40	3. 47	·0942	7. 6	·01290	3. 0	56·3	56·2
10. 10	6. 30		***	12. 45:	·01515	4. 0	57·0	57·0
	***	7. 50	·0931	20. 30	·02347	6. 0	58·4	57·6
13. 0:	7. 0	10. 15	·0960	23. 59	·01963	9. 0	56·5	57·0
	***	10. 26	·0956			12. 0	53·5	54·3
			***			18. 0	45·5	47·0
17. 30:	21. 5. 35					20. 0	44·5	46·1
19. 45	20. 58. 45	11. 53	·0961			21. 0	45·0	46·2
20. 30	20. 59. 0	12. 17	·0966			22. 0	46·7	47·3
23. 59	21. 15. 30	12. 38	·0966			23. 0	48·2	48·4
		13. 4	·0974					
			***					
		13. 27	·0971					
		13. 42	·0975					
		14. 3	·0966					
		14. 20	·0973					
		15. 17	·0973					
		17. 38	·0980					
		18. 17	·0986					
		20. 16	·0964					
		22. 7	·0943					
		22. 35	·0933					
			***					
		23. 20	·0933					
		23. 59	·0939					
Apr. 11		Apr. 11		Apr. 11		Apr. 11		
0. 0	21. 15. 30	0. 0	·0939	0. 0	·01963	0. 0	50·0	51·0
0. 30	16. 45	3. 36	·0945	1. 19	·01960	1. 0	52·3	52·2
1. 36	17. 10	3. 47	·0950	4. 5	·01397	3. 0	56·3	56·4
3. 40	9. 50	5. 18	·0952	5. 50	·01130	9. 0	58·5	59·0
5. 30	7. 0	5. 33	·0945	7. 26	·01242	21. 10	49·4	50·3
	***	5. 47	·0954	12. 37	·01370			
7. 40	6. 50	6. 7	·0941	21. 35	·02108			
8. 0	1. 30	7. 5	·0955	23. 59	·02080			
8. 20	3. 0	7. 36	·0947					
	***	8. 3	·0951					
9. 40	4. 30	8. 18	·0940					
	***	8. 43	·0945					
10. 35	3. 0	9. 3	·0937					
10. 45	5. 35	9. 16	·0939					
11. 0	3. 0	9. 42	·0937					
11. 33	3. 10	9. 49	·0941					
11. 47	6. 5	10. 13	·0937					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 11		Apr. 11						
h m	° ′ ″	h m		h m		h m	°	°
12. 11	21. 5. 0	10. 28	·0946					
13. 5	20. 57. 35	10. 40	·0935					
14. 25	20. 59. 30	11. 2	·0943					
	***	11. 18	·0940					
15. 2	21. 4. 0	11. 52	·0952					
15. 35	3. 15	12. 13	·0949					
16. 5	6. 30	12. 46	·0957					
16. 54	2. 30		***					
	***	14. 21	·0952					
17. 40	4. 30	15. 3	·0955					
18. 10	2. 0	15. 34	·0953					
18. 23	21. 3. 5	16. 3	·0962					
19. 2	20. 59. 0		***					
19. 14	21. 0. 30	17. 36	·0958					
19. 28	21. 0. 30		***					
19. 43	20. 59. 0	18. 55	·0961					
20. 40	21. 0. 10		***					
23. 59	17. 0	20. 47	·0941					
			(†)					
		21. 10	·0932*					
Apr. 12		Apr. 12		Apr. 12		Apr. 12		
0. 0	21. 17. 0		(†)	0. 0	·02080	1. 0	54·7	55·0
0. 54	18. 30	0. 32	·0934	1. 31	·02022	3. 0	58·0	58·6
1. 30	17. 0	1. 29	·0929	3. 46	·01570	9. 0	59·7	59·8
1. 55	17. 0	2. 3	·0933	6. 17	·01258	21. 0	50·0	51·0
2. 30	14. 10	2. 37	·0930	10. 18	·01342			
4. 10	10. 25	4. 15	·0944	13. 36	·01581			
6. 20	5. 0	4. 28	·0950	19. 8	·02150			
9. 0	7. 35		***	22. 12	·02341			
	***	5. 14	·0944	23. 59	·02217			
14. 5	7. 20	5. 36	·0948					
14. 40	10. 0	6. 29	·0938					
15. 24	5. 5		***					
	***	8. 16	·0952					
18. 42	6. 30	9. 26	·0949					
19. 10	3. 20		***					
19. 19	5. 0	13. 7	·0963					
19. 42	3. 15	13. 48	·0969					
20. 50	7. 0	14. 20	·0968					
21. 40	6. 30	15. 17	·0973					
23. 55	16. 15	16. 28	·0971					
23. 59	15. 30		***					
		17. 46	·0974					
		18. 45	·0972					
			***					
		20. 16	·0955					
		20. 41	·0955					
			***					
		22. 40	·0939					
			***					
		23. 43	·0939					
		23. 59	·0933					
Apr. 13		Apr. 13		Apr. 13		Apr. 13		
0. 0	21. 15. 30	0. 0	·0933	0. 0	·02217	1. 0	53·7	53·8
	***	2. 28	·0941	2. 5	·02110	3. 0	56·0	55·7
2. 0	16. 0	4. 5	·0955	2. 45	·02046	9. 0	55·3	55·7
					(†)			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 13		Apr. 13		Apr. 13		Apr. 13		
h m	° ′ ″	h m		h m		h m	°	°
4. 0	21. 11. 35	5. 21	·0960	4. 5	·01240	22. 0	49 ·5	50 ·1
6. 10	8. 15	6. 18	·0966	6. 22	·01146			
6. 50	6. 0	6. 43	·0963	10. 15:	·01141			
7. 20	8. 0	8. 36	·0970	14. 7	·01310			
9. 0	5. 30	8. 42	·0977	18. 46	·01621			
9. 20	9. 25	8. 47	·0968	21. 25	·01720			
9. 40	4. 30	9. 8	·0978	23. 59	·01709			
9. 55	6. 0	9. 22	·0974					
10. 25	2. 15	9. 42	·0978					
12. 0	8. 0	10. 7	·0959					
12. 27	6. 10	11. 55	·0970					
13. 5	9. 5	12. 47	·0961					
14. 35	6. 0	13. 8	·0965					
15. 40	7. 20	14. 34	·0962					
16. 10	6. 10		***					
16. 55	10. 5	15. 35	·0967					
	***	16. 18	·0964					
18. 54	2. 30	16. 46	·0973					
	***	17. 26	·0974					
19. 45	1. 25	17. 57	·0979					
	***	18. 36	·0975					
21. 10	4. 0	19. 6	·0977					
22. 50	12. 30	19. 43	·0975					
	***		***					
23. 59	15. 0	21. 8	·0956					
			(†)					
		22. 0	·0947*					
Apr. 14		Apr. 14		Apr. 14		Apr. 14		
0. 0	21. 15. 0		(†)	0. 0	·01709	10. 40	50 ·0	51 ·4
0. 40	17. 10	0. 25	·0962	5. 13	·01748	21. 0	48 ·0	49 ·8
	***		***	10. 17	{ ·01768			
2. 15:	15. 15	2. 18	·0973		{ ·01702			
6. 15:	7. 0		***		***			
7. 15	8. 0	3. 7	·0969	21. 8	·01750			
7. 40	7. 10	3. 48	·0973		***			
8. 58	9. 35	4. 37	·0980	23. 59	·01709			
9. 22	4. 0	5. 25	·0975					
	***	5. 53	·0976					
10. 32	0. 10	6. 45	·0975					
11. 25	5. 0	7. 7	·1001					
	***		***					
12. 50	8. 0	7. 56	·0991					
	***	8. 8	·0995					
14. 0	3. 50	8. 21	·0991					
	***	8. 45	·1000					
16. 0	6. 10	8. 50	·0995					
16. 50:	9. 25	9. 6	·1001					
17. 55	6. 10	9. 17	·0996					
	***	9. 51	·0975					
18. 53	7. 0	10. 7	·0983					
19. 2	9. 10	10. 20	·0975					
19. 45	6. 0		***					
	***	12. 19	·0983					
20. 53	10. 50		***					
21. 45	9. 0	12. 49	·0990					
22. 5	14. 0	13. 6	·0999					
22. 40	13. 10		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 14		Apr. 14						
h m	° ′ ″	h m		h m		h m	°	°
23. 15:	21. 16. 30	13. 45	·0990					
23. 59	15. 35		***					
		15. 25	·0996					
			***					
		17. 2	·0992					
		17. 45	·0997					
			***					
		18. 40	·0993					
		18. 53	·0996					
		20. 19	·0978					
		20. 37	·0980					
		21. 33	·0967					
		21. 56	·0972					
		22. 15	·0953					
		22. 43	·0959					
			***					
		23. 59	·0950					
Apr. 15		Apr. 15		Apr. 15		Apr. 15		
0. 0	21. 15. 35	0. 0	·0950	0. 0	·01709	1. 0	51 ·3	51 ·8
0. 45	20. 0	0. 28	·0955	0. 50	·01662	3. 0	53 ·8	54 ·0
1. 24	19. 45	0. 36	·0946	1. 0	·01680*	9. 0	53 ·6	54 ·2
	***	0. 45	·0952		(†)	21. 10	50 ·8	50 ·7
2. 10	16. 10	1. 39	·0919	4. 45	·00416			
	***	2. 4	·0922		***			
2. 55	17. 0	2. 17	·0937	6. 4	·00542			
3. 17	21. 30		***		***			
3. 26	17. 25	2. 50	·0927	7. 55	·00475			
3. 36	25. 0	3. 16	·0939	8. 16	·00419			
3. 47	15. 0	3. 25	·0932	8. 37	·00430			
3. 58	20. 0	3. 50	·0957	9. 14	·00293			
4. 6	11. 0	4. 7	·0933	9. 46	·00285			
4. 14	23. 35	4. 16	·0975	10. 6	·00350			
4. 30	8. 5	4. 29	·0928		***			
4. 44	16. 0	4. 44	·0955	12. 9	·00280			
4. 58	12. 0	4. 56	·0919		***			
5. 2	16. 0	5. 5	·0930	13. 7	·00441			
5. 11	14. 5	5. 10	·0923		***			
5. 21	17. 0	5. 18	·0938	21. 25	·00872			
5. 30	12. 5	5. 35	·0932		***			
5. 43	15. 30	5. 40	·0938	23. 59	·00838			
5. 54	4. 30	5. 47	·0913					
6. 0	10. 30	6. 0	·0931					
6. 13	7. 0	6. 15	·0912					
6. 22	10. 0	6. 22	·0923					
6. 30	10. 0	6. 42	·0912					
6. 53	6. 0	6. 50	·0908					
7. 9	9. 0	7. 0	·0922					
7. 25	3. 15	7. 7	·0911					
7. 31	9. 0	7. 16	·0915					
7. 44	2. 0	7. 20	·0907					
8. 2	21. 6. 0	7. 29	·0918					
8. 15	20. 58. 30	7. 38	·0902					
8. 25	21. 0. 30	7. 46	·0918					
8. 44	20. 44. 0	7. 56	·0918					
8. 53	21. 2. 10	8. 15	·0893					
9. 4	20. 58. 35	8. 29	·0911					
9. 38	21. 21. 0		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

VERTICAL FORCE.—April 14. The usual diurnal range did not take place on this day, and on April 15 the magnet was examined, and settled in a different position, as shown by the difference between the observations at $1^h.\ 0^m$ and $4^h.\ 45^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 15		Apr. 15	
h m	° ′ ″	h m	
10. 5	20. 57. 0	8. 45	·0914
10. 15	58. 0	9. 25	·0945
10. 28	20. 56. 20	9. 36	·0940
10. 45	21. 0. 30	9. 47	·0893
11. 15	20. 51. 0	10. 8	·0923
12. 0	21. 6. 10		***
12. 23	20. 57. 0	10. 36	·0920
12. 40	21. 4. 0		***
13. 0	20. 59. 40	11. 7	·0898
13. 10	21. 4. 30	11. 25	·0912
14. 10	10. 50		***
15. 0	8. 0	11. 44	·0905
	***	12. 2	·0923
16. 40	9. 0	12. 15	·0897
17. 15	15. 10	12. 37	·0923
	***	12. 46	·0915
18. 13	6. 0	13. 15	·0935
18. 29	8. 15	13. 37	·0939
	***		***
19. 6	4. 5	14. 45	·0936
19. 30	6. 0		***
19. 45	2. 30	15. 56	·0945
	***		***
20. 10	6. 0	17. 50	·0944
20. 32	4. 40		***
20. 48	6. 30	18. 35	·0954
21. 25	7. 10		***
22. 30	12. 15	21. 15	·0925
	***	21. 42	·0928
23. 59	16. 10	22. 20	·0901
		23. 25	·0913
		23. 59	·0908
Apr. 16		Apr. 16	
0. 0	21. 16. 20	0. 0	·0908
0. 50	18. 0		***
	***	1. 45	·0910
2. 0	19. 10		***
2. 35	19. 0	2. 47	·0893
3. 13	12. 5		***
4. 20:	13. 0	3. 20	·0911
6. 15	5. 0	3. 46	·0906
7. 7:	8. 0		***
9. 30	9. 50	10. 7	·0925
	***	11. 45	·0933
12. 20	10. 0	12. 12	·0931
12. 45	8. 30	12. 45	·0937
13. 20	8. 20		***
14. 30	13. 0	14. 40	·0939
15. 15	11. 0		***
17. 0	9. 0	15. 49	·0943
18. 0	11. 35	16. 36	·0955
20. 30:	4. 0	17. 34	·0958
23. 59	16. 30	18. 9	·0948
			***
		19. 50	·0955
			***
		21. 45	·0937

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 16	
0. 0	·00838
2. 7	·00705
	·00656
4. 6	·00298
6. 29	·00650
11. 45:	·00761
16. 44	·01276
23. 59	·00782

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 16		
1. 0	56·0	55·0
3. 0	58·3	58·6
9. 0	59·0	59·2
20. 0	49·0	50·0
21. 9	49·3	50·0
22. 0	49·8	50·2
23. 0	50·7	51·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Apr. 16	
22. 27	
23. 37	
23. 59	
Apr. 17	
0. 0	21. 16. 30
0. 40	18. 30
	***
2. 15	18. 0
2. 41	15. 15
6. 30:	8. 0
9. 0	9. 10
15. 50	8. 15
17. 50	8. 30
20. 6	2. 50
20. 36	3. 5
23. 0	15. 30
23. 59	16. 20
Apr. 18	
0. 0	21. 16. 20
2. 0	16. 0
3. 35	12. 30
	***
6. 10:	7. 0
9. 15	9. 0
15. 0:	8. 35
	***
20. 15:	2. 30
23. 59	15. 0
Apr. 19	
0. 0	21. 15. 0
	***
0. 45	16. 40
1. 2	15. 30
	***
2. 20	17. 0
	***
4. 30	10. 35
5. 10	11. 30
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Apr. 16	
22. 27	·0924
23. 37	·0909
23. 59	·0913
Apr. 17	
0. 0	·0913
3. 7	·0918
5. 21	·0934
7. 58	·0937
	***
11. 17	·0949
	***
13. 45	·0953
	***
16. 55	·0959
	***
19. 17	·0960
20. 18	·0952
	***
23. 17	·0904
23. 59	·0906
Apr. 18	
0. 0	·0906
1. 45	·0912
2. 13	·0920
3. 45	·0922
4. 8	·0919
4. 36	·0923
4. 50	·0928
	***
5. 56	·0931
6. 37	·0929
8. 38	·0936
9. 3	·0934
11. 43	·0943
	***
14. 37	·0955
14. 50	·0950
	***
17. 45	·0956
20. 7	·0951
22. 18	·0926
22. 47	·0926
23. 20	·0921
23. 59	·0922
Apr. 19	
	(†)
1. 0	·0929*
1. 46	·0938
2. 11	·0933
2. 18	·0945
	***
3. 47	·0938
	***
4. 26	·0947
4. 38	·0935

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 17	
0. 0	·00782
	(†)
2. 7	·02302
4. 13	·02190
9. 18	·02183
15. 45	·02770
23. 59	·02610
Apr. 18	
0. 0	·02610
0. 52	·02571
3. 45	·02062
6. 25	·02157
9. 0	·02160
11. 14:	·02260
16. 16	·02813
23. 59	·02658
Apr. 19	
0. 0	·02658
4. 37	·02265
	***
9. 18	·02109
	***
13. 15	·02273
	·02395
16. 41	·02731
	***
23. 59	·02602

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 17		
0. 0	51·8	51·9
1. 0	54·3	54·1
2. 0	55·7	55·5
3. 0	57·3	57·1
4. 0	58·0	57·0
6. 0	59·0	58·5
9. 0	56·8	56·8
12. 0	54·5	55·0
18. 0	49·8	50·7
20. 0	49·4	50·0
21. 7	50·0	50·4
22. 0	51·0	51·0
23. 0	52·6	52·3
Apr. 18		
0. 0	55·1	54·5
1. 0	56·0	55·5
2. 0	57·2	56·8
3. 0	58·5	58·1
9. 17	56·3	56·2
21. 0	49·0	50·0
Apr. 19		
1. 0	52·8	52·7
3. 0	54·8	54·5
9. 0	53·3	54·0
21. 0	46·0	46·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

VERTICAL FORCE.—April 17. The Photographic Trace being situated near to the boundary of the paper, the adjustments were altered between the hours of 1 and 2, so that the readings were increased by 0·0174 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 19		Apr. 19						
h m	° ′ ″	h m		h m		h m	°	°
6. 25	21. 10. 0	5. 19	·0959					
7. 0	20. 56. 0	5. 34	·0952					
	***	5. 46	·0957					
8. 17	21. 7. 0	6. 5	·0963					
8. 36	5. 0	6. 12	·0957					
9. 10	4. 30	6. 37	·0955					
10. 20	8. 30	6. 55	·0933					
	***	7. 26	·0963					
12. 35	9. 15	7. 37	·0961					
12. 57	7. 30	7. 50	·0953					
	***	8. 8	·0956					
15. 45	11. 0	8. 27	·0949					
16. 40	7. 35	8. 53	·0956					
	***	9. 35	·0951					
18. 0	7. 30	10. 15	·0958					
	***		***					
18. 40	4. 0	12. 30	·0960					
19. 0	5. 0	12. 46	·0968					
19. 30	1. 0	13. 7	·0957					
20. 0	0. 30		***					
	***	14. 5	·0965					
23. 45	19. 0		***					
23. 59	18. 0	15. 46	·0966					
			***					
		17. 28	·0966					
			***					
		18. 17	·0970					
		18. 30	·0965					
		18. 45	·0973					
			***					
		20. 17	·0966					
			***					
		21. 40	·0940					
		21. 47	·0944					
		22. 17	·0935					
		22. 46	·0935					
			***					
		23. 20	·0925					
		23. 59	·0933					
Apr. 20		Apr. 20		Apr. 20		Apr. 20		
0. 0	21. 18. 0	0. 0	·0933	0. 0	·02602	1. 0	51 ·5	51 ·2
1. 0	18. 50		***	2. 28	·02350	3. 0	54 ·7	54 ·0
1. 55	16. 0	1. 40	·0923		***	9. 32	52 ·2	52 ·7
2. 6	17. 0		***	4. 40	·01938	22. 54	43 ·0	43 ·6
	***	2. 37	·0938		***			
3. 26	13. 0		***	7. 8	·02091			
3. 44	15. 10	3. 28	·0929		***			
4. 11	9. 0	3. 45	·0943	10. 6	·02017			
	***	4. 16	·0932		***			
5. 32	10. 40	4. 34	·0941	11. 52	·02123			
	***	4. 40	·0936	12. 17	·02092			
6. 24	21. 9. 0	4. 58	·0944	13. 6	{ ·02160			
6. 53	20. 50. 30	5. 15	·0943		{ ·02253			
7. 26	21. 2. 30	5. 29	·0953		***			
7. 38	1. 25	5. 47	·0953	17. 17	·02663			
8. 0	6. 10	6. 42	·0926		***			
	***	7. 5	·0969	22. 40	·02650			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 20		Apr. 20						
h m	° ′ ″	h m		h m		h m	°	°
10. 11	21. 9. 25	7. 20	·0969	23. 59	·02579			
11. 2	6. 0	7. 39	·0944					
11. 10	8. 35	7. 57	·0942					
11. 44	7. 35	8. 13	·0931					
11. 55	17. 0		***					
12. 29	2. 15	8. 56	·0945					
13. 15	0. 45	9. 18	·0941					
13. 25	3. 35		***					
13. 34	2. 10	10. 10	·0950					
13. 52	4. 5	10. 46	·0943					
14. 0	3. 0	11. 17	·0952					
14. 10	4. 30	11. 36	·0947					
14. 30	0. 0	11. 56	·0965					
14. 47	2. 0	12. 15	·0951					
15. 19	14. 0	12. 28	·0959					
15. 31	16. 0		***					
16. 5	7. 10	13. 12	·0949					
16. 13	9. 0	13. 22	·0958					
16. 25	5. 0	13. 33	·0951					
16. 36	7. 0	13. 50	·0952					
16. 50	4. 45	14. 6	·0962					
17. 2	6. 40		***					
17. 22	5. 0	14. 45	·0961					
17. 49	10. 30	15. 17	·0941					
18. 15	5. 0	15. 38	·0958					
18. 44	11. 40		***					
19. 2	7. 0	16. 26	·0958					
19. 22	9. 0	16. 55	·0967					
19. 59	2. 35	17. 9	·0961					
	***	17. 46	·0968					
20. 27	6. 15	18. 17	·0955					
	***	18. 40	·0967					
21. 40	6. 0		***					
23. 35	13. 40	19. 8	·0961					
23. 59	14. 10		***					
		19. 42	·0966					
			***					
		22. 37	·0937					
		23. 59	·0933					
Apr. 21		Apr. 21		Apr. 21		Apr. 21		
0. 0	21. 14. 15	0. 0	·0933	0. 0	·02579	8. 0	49 ·5	50 ·5
0. 30	18. 15	0. 35	·0936	3. 10	·02478	21. 0	44 ·6	45 ·2
0. 45	17. 10	1. 7	·0929	9. 0	·01980			
	***		(†)	11. 46:	·01932			
2. 15	19. 10	3. 30	·0968	15. 15	·02060			
2. 40	17. 0	4. 16	·0964	20. 17	·02450			
	***	5. 45	·0978	22. 36	{ ·02483			
4. 38	12. 15	6. 15	·1004		{ ·02430			
4. 45	13. 0	6. 41	·0976	23. 59	·02400			
5. 20	11. 25	6. 48	·0986					
5. 55	3. 0	7. 6	·0978					
6. 10	4. 35	7. 13	·0983					
6. 41	0. 30	7. 53	·0963					
7. 25	6. 15	8. 26	·0963					
7. 46	5. 0	8. 38	·0974					
8. 0	0. 0	8. 52	·0966					
8. 24	5. 0	9. 26	·0974					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 21		Apr. 21						
h m	° ′ ″	h m		h m		h m	°	°
8. 32	21. 4. 35	10. 45	·0958					
8. 45	7. 45		***					
9. 13	5. 25	12. 22	·0964					
9. 30	6. 0	12. 46	·0971					
10. 8	1. 25	14. 7	·0966					
11. 3	9. 5		***					
11. 15	7. 0	16. 38	·0972					
11. 55	9. 50	16. 58	·0967					
12. 20	16. 30	17. 57	·0968					
13. 5	10. 30	18. 29	·0979					
13. 50	10. 35	18. 46	·0974					
14. 20	13. 5	19. 55	·0973					
14. 50	10. 50		***					
15. 14	11. 0	21. 59	·0943					
16. 39	5. 0	22. 30	·0929					
	***	23. 7	·0929					
17. 25	5. 30		(†)					
17. 41	8. 0							
18. 15	5. 0							
18. 26	6. 45							
18. 45	4. 30							
18. 58	6. 0							
20. 15	1. 20							
23. 15	13. 30							
23. 30	16. 45							
23. 45	16. 0							
23. 59	17. 0							
Apr. 22		Apr. 22		Apr. 22		Apr. 22		
0. 0	21. 17. 0		(†)	0. 0	·02400	1. 0	49 ·7	50 ·0
0. 15	19. 15	1. 0	·0935*		***	3. 0	53 ·0	53 ·0
	***	2. 6	·0946	4. 7	·01892	9. 0	55 ·3	55 ·5
1. 45	17. 30	2. 30	·0933		***	21. 0	50 ·5	51 ·0
2. 2	19. 0		***	6. 16	·02046			
2. 55	14. 15	3. 16	·0948	9. 17	·02050			
	***	3. 30	·0947		***			
4. 45	12. 0	3. 42	·0956	9. 46	·01932			
4. 55	13. 50	3. 48	·0952	10. 13	·01982			
5. 15	14. 0	4. 39	·0966	10. 27	·01950			
5. 26	4. 0	4. 46	·0961	11. 43	·01992			
5. 40	5. 30	4. 56	·0965	13. 0	·01922			
5. 54	4. 0	5. 12	·0953	14. 10	·01963			
	***	5. 18	·0958	16. 26	·02110			
6. 55	4. 5	5. 21	·0953		***			
7. 45	2. 30	5. 42	·0970	23. 5	·02442			
8. 31	4. 20	5. 56	·0957	23. 59	·02430			
9. 0	2. 0	6. 9	·0961					
9. 24	8. 25	7. 40	·0932					
9. 32	1. 25	8. 0	·0923					
9. 50	11. 30	8. 47	·0920					
10. 4	1. 10	9. 15	·0926					
10. 20	21. 8. 15	9. 23	·0940					
11. 0	20. 59. 30	9. 34	·0931					
	***	9. 42	·0956					
11. 45	21. 0. 0	10. 0	·0915					
11. 55	4. 0	10. 12	·0941					
12. 6	2. 30	10. 37	0926					
12. 30	2. 0		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 22		Apr. 22						
h m	° ′ ″	h m		h m		h m	°	°
12. 55	21. 3. 0	11. 46	·0937					
13. 25	3. 50	12. 6	·0927					
13. 45	1. 5	12. 19	·0944					
14. 0	21. 1. 25	12. 41	·0931					
14. 14	20. 59. 25	13. 15	·0958					
14. 50	21. 10. 30	13. 43	·0966					
	***		***					
16. 15:	6. 0	14. 37	·0938					
	***		***					
17. 55	8. 30	16. 42	·0955					
18. 19	6. 0		***					
18. 25	7. 30	17. 46	·0944					
18. 55	3. 10		***					
19. 0	5. 30	19. 27	·0952					
19. 10	3. 0		***					
19. 30	4. 35	20. 15	·0938					
	***		***					
21. 0	5. 0	21. 16	·0939					
23. 25	15. 20	21. 37	·0931					
	***	22. 6	·0932					
23. 59	15. 0		***					
		22. 58	·0917					
			***					
		23. 59	·0926					
Apr. 23		Apr. 23		Apr. 23		Apr. 23		
0. 0	21. 15. 0	0. 0	·0926	0. 0	·02430	1. 0	54 ·0	54 ·0
0. 30	15. 35	2. 27	·0934		***	3. 0	56 ·0	55 ·8
1. 15	18. 55	2. 55	·0924	5. 37	·02002	9. 0	55 ·0	55 ·2
2. 32	17. 0		***	11. 35	·02086	20. 0	46 ·0	47 ·0
3. 5	14. 30	4. 45	·0947	18. 46	·02877	21. 0	46 ·7	47 ·0
5. 45	8. 35	5. 0	·0945	23. 5	·02780	22. 0	47 ·2	47 ·7
	***	5. 22	·0954	23. 59	·02681	23. 0	49 ·0	50 ·0
7. 40	21. 6. 40	5. 40	·0947					
	***		***					
9. 0	20. 59. 0	7. 17	·0956					
9. 54	21. 1. 0	8. 9	·0947					
10. 55	6. 30		***					
11. 6	10. 25	8. 45	·0954					
11. 25	10. 30	9. 8	·0950					
11. 57	7. 0	10. 4	·0952					
13. 5	9. 5	10. 17	·0947					
14. 5	8. 0	10. 46	·0953					
14. 35	10. 55	11. 17	·0971					
15. 15	12. 35	11. 46	·0961					
16. 0	9. 30		***					
17. 37	7. 30	12. 37	·0958					
18. 47	10. 20		***					
19. 10	8. 40	14. 13	·0962					
19. 30	9. 30	14. 38	·0957					
	***	15. 15	·0966					
21. 15	7. 35	16. 13	·0964					
	***		***					
23. 40	19. 0	17. 46	·0973					
23. 59	19. 30		***					
		19. 50	·0964					
			***					
		21. 42	·0942					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Apr.23 h m		h m		h m	°	°
		22. 5	·0932					
		22. 36	·0927 ***					
		23. 17	·0932 ***					
		23. 45	·0924					
		23. 59	·0929					
Apr.24		Apr.24		Apr.24		Apr.24		
0. 0	21. 19. 30 ***	0. 0	·0929	0. 0	·02681	0. 0	50 ·8	51 ·7
		0. 6	·0930	0. 20	·02620	1. 0	52 ·8	53 ·3
1. 47	22. 0		(†)	1. 17	·02573	2. 0	54 ·8	55 ·2
2. 0	19. 20	1. 0	·0927*	4. 40	·01948	3. 0	56 ·0	56 ·6
4. 10	11. 40	3. 0	·0936*	6. 45	·02049	4. 0	57 ·0	57 ·0
5. 0	10. 35	7. 22	·0934	11. 18	·02028	6. 0	59 ·0	59 ·0
5. 40	7. 50	8. 17	·0932	14. 28	·02173	9. 0	58 ·5	58 ·0
7. 44	4. 35	9. 46	·0940	20. 36	·02902	12. 0	56 ·0	56 ·0
9. 0	7. 30 ***	10. 31	·0948	23. 59	·02810	18. 0	50 ·2	50 ·2
		10. 45	·0944			20. 0	50 ·5	51 ·0
11. 55	4. 0	11. 14	·0938			21. 0	51 ·8	51 ·7
13. 15	6. 0	11. 47	·0942			22. 0	52 ·0	52 ·2
14. 0	10. 0	12. 36	·0934 ***			23. 0	52 ·7	53 ·0
14. 55	8. 30							
15. 24	5. 0 ***	13. 47	·0953					
		14. 7	·0959 ***					
17. 16	5. 45							
18. 10:	8. 30	14. 52	·0953					
18. 45	4. 20 ***	15. 16	·0960					
		15. 45	·0954 ***					
19. 45	2. 0							
20. 15	1. 25 ***	17. 8	·0954					
		17. 33	·0959					
21. 45	5. 30	17. 50	·0956 ***					
22. 15	10. 15							
23. 59	14. 95	19. 28	·0962					
		20. 40	·0959 ***					
		21. 45	·0928					
		22. 6	·0935 ***					
		23. 59	·0923					
Apr.25		Apr.25		Apr.25		Apr.25		
0. 0	21. 15. 0	0. 0	·0923	0. 0	·02810	0. 0	53 ·3	53 ·7
0. 58	16. 20	2. 0	·0929	1. 13	·02822	1. 0	54 ·0	54 ·2
3. 15	14. 30	3. 18	·0936	2. 46	·02743	3. 0	56 ·3	56 ·0
4. 45:	9. 5	3. 32	·0931	8. 18	·02042	9. 0	58 ·4	59 ·5
6. 15	6. 10	4. 54	·0934		***	21. 0	51 ·8	51 ·6
8. 0	7. 0	5. 57	·0943	13. 26	·02072			
9. 20	6. 35	6. 18	·0940	16. 36	·02342			
9. 46	4. 30	7. 17	·0941	21. 17	·02823			
10. 9	7. 0 ***	8. 11	·0946	23. 59	·02846			
		8. 29	·0943					
12. 32	2. 0	8. 57	·0941					
14. 30	6. 50	9. 24	·0943					
16. 30:	7. 25	9. 47	·0939					
17. 40	6. 15	10. 30	·0946					
18. 5	8. 0	12. 13	·0951					
18. 39	4. 40	12. 49	·0947					
Apr.25		Apr.25		Apr.25		Apr.25		
18. 45	21. 6. 30 ***	13. 27	·0953					
19. 15	3. 10	13. 57	·0950					
19. 39	4. 30	17. 0	·0961					
20. 5	2. 0	18. 15	·0956					
22. 0	8. 5 ***	18. 24	·0948					
		20. 4	·0957					
23. 0	9. 10	21. 45	·0929					
23. 59	12. 25	23. 59	·0925					
Apr.26		Apr.26		Apr.26		Apr.26		
0. 0	21. 12. 30	0. 0	·0925	0. 0	·02846	1. 0	56 ·5	55 ·8
0. 45	14. 0		(†)	1. 12	·02797	3. 0	58 ·3	58 ·0
1. 7	16. 40 ***	1. 0	·0924*	5. 0	·02300	9. 0	57 ·2	57 ·3
		2. 3	·0921 ***	9. 20:	·02080	21. 0	47 ·2	48 ·0
2. 40	15. 30			17. 36	·02873			
5. 0	9. 45	3. 20	·0926 ***	23. 59	·02710			
6. 10	7. 15							
7. 30:	6. 10	5. 43	·0948					
11. 10	8. 0	6. 36	·0944					
11. 55	6. 5	7. 47	·0951					
16. 17	7. 0	8. 53	·0948					
16. 45	4. 30	10. 13	·0955					
17. 45	5. 0	11. 7	·0953					
18. 10	1. 25 ***	11. 28	·0958 ***					
19. 5	0. 30	12. 56	·0955					
19. 23	21. 3. 0 ***	16. 25	·0962					
		16. 39	·0959					
20. 43	20. 58. 30	17. 50	·0964					
20. 54	21. 2. 0 ***	19. 11	·0962					
		20. 16	·0963 ***					
22. 52	8. 0							
23. 59	14. 0	22. 17	·0940 ***					
		22. 49	·0946					
		23. 9	·0941					
		23. 31	·0941 (†)					
Apr.27		Apr.27		Apr.27		Apr.27		
0. 0	21. 13. 30 (†)		(†)	0. 0	·02710 ***	1. 0	48 ·3	49 ·0
		1. 0	·0941*			3. 0	50 ·0	50 ·0
0. 50	14. 30	3. 0	·0950*	9. 51	{·02778	9. 0	48 ·2	49 ·6
1. 25	15. 35	3. 48	·0954		{·02690 ***	22. 27	43 ·0	43 ·7
2. 2	15. 50	4. 13	·0952					
2. 28	14. 45	4. 46	·0961	18. 36	·02773			
2. 41	15. 30	4. 58	·0959	23. 59	·02678			
3. 7	13. 25	5. 43	·0971					
6. 0:	7. 10	6. 31	·0971					
7. 20	7. 13	7. 6	·0964					
8. 0	3. 10	7. 41	·0962					
8. 15	3. 0	7. 48	·0973					
8. 36	7. 0	8. 22	·0964					
9. 24	4. 45	8. 45	·0981					
11. 25	6. 35	9. 13	·0964					
11. 50	5. 15 ***	9. 39	·0961					
		9. 52	·0966					
15. 49	9. 0	10. 15	·0964					
19. 0	3. 0	11. 28	·0965					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 27		Apr. 27						
h m	° ′ ″	h m		h m		h m	°	°
19. 55	21. 0. 0	12. 11	·0974					
22. 40	8. 25	13. 13	·0973					
23. 59	13. 30	14. 52	·0977					
		15. 30	·0974					
		16. 9	·0981					
		16. 39	·0977					
		18. 14	·0981 ***					
		20. 9	·0975					
		23. 15	·0950					
		23. 59	·0957					
Apr. 28		Apr. 28		Apr. 28		Apr. 28		
0. 0	21. 13. 35	0. 0	·0958	0. 0	·02678	9. 45	49 ·4	50 ·2
1. 43:	16. 0	0. 37	·0953	2. 45	·02602	21. 0	46 ·5	47 ·3
3. 52	13. 30	1. 45	·0963		(†)			
4. 25	11. 0	1. 56	·0959	9. 42	·02110			
4. 40	11. 15	3. 15	·0963	13. 50:	·02048			
6. 15	8. 10		(†)	20. 29	·02371			
10. 40	7. 10	6. 11	·0960 ***	22. 46:	·02431			
11. 30	6. 0			23. 59	·02377			
12. 5	7. 30	8. 40	·0974					
13. 7	3. 10 ***	8. 46	·0970					
		9. 34	·0976					
14. 32	6. 40	9. 56	·0970					
14. 54	5. 0 ***	10. 45	·0976					
		11. 4	·0972 ***					
15. 44	6. 35 ***							
		12. 27	·0976					
20. 30	2. 0	12. 46	·0971 ***					
21. 20	2. 35 ***							
		13. 26	·0977					
23. 59	13. 30	14. 20	·0971					
		14. 42	·0977					
		15. 15	·0971 ***					
		17. 5	·0981 ***					
		18. 37	·0976 ***					
		21. 16	·0958 ***					
		23. 8	·0934					
		23. 37	·0933 (†)					
Apr. 29		Apr. 29		Apr. 29		Apr. 29		
0. 0	21. 13. 35		(†)	0. 0	·02377	1. 0	51 ·0	51 ·6
1. 30	17. 5	0. 56	·0930	2. 11	·02200	3. 0	54 ·7	54 ·3
2. 0	15. 40	1. 18	·0943	4. 45	·01829	9. 0	53 ·2	53 ·8
3. 20:	14. 10	2. 12	·0921	7. 17	·01902	21. 0	45 ·2	45 ·2
6. 50:	7. 0 ***	3. 47	·0941	11. 58:	·01926			
		6. 45	·0945	16. 45	·02376			
15. 0	8. 0	6. 51	·0949	20. 6	·02840 ***			
15. 21	12. 0	7. 17	·0943					
16. 40	9. 0 ***	8. 29	·0950 ***	23. 59	·02700			
18. 0	2. 30	13. 38	·0959					
18. 15	21. 4. 30 ***	14. 56	·0966					
		15. 22	·0961					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 29		Apr. 29						
h m	° ′ ″	h m		h m		h m	°	°
19. 15	20. 59. 0 ***	16. 28:	·0974					
		17. 5	·0966 ***					
21. 20	21. 3. 0							
21. 36	6. 15	18. 20	·0971					
21. 50	6. 0	18. 44	·0977					
23. 59	21. 12. 0	19. 12	·0969 ***					
		21. 47	·0943					
		21. 55	·0948					
		23. 45	·0931					
		23. 59	·0931					
Apr. 30		Apr. 30		Apr. 30		Apr. 30		
0. 0	21. 12. 5	0. 0	·0931	0. 0	·02700	1. 0	52 ·7	52 ·2
1. 5	14. 0	0. 47	·0929	0. 55	·02572	3. 0	56 ·3	55 ·7
1. 52	14. 0	1. 6	·0934	5. 36	·01776	9. 0	57 ·3	56 ·5
4. 0	9. 45	1. 37	·0926	13. 50	·01809	20. 0	52 ·0	53 ·0
6. 45:	6. 0	3. 19	·0932	21. 30	·02160	21. 0	52 ·0	52 ·5
8. 15	7. 10	3. 50	·0938	23. 59	·02143	22. 0	52 ·4	53 ·2
10. 50	7. 0	4. 8	·0934			23. 0	53 ·1	53 ·7
11. 26	4. 5	4. 45	·0945					
12. 3	6. 35	5. 7	·0941 ***					
12. 45	7. 30							
13. 30	7. 35	7. 49	·0955 ***					
14. 5	4. 40							
15. 15	6. 0	10. 16	·0954 ***					
16. 25	3. 10 ***							
		11. 8	·0960					
18. 15	2. 25	11. 26	·0954 ***					
18. 36	4. 0							
19. 0	2. 15	12. 5	·0961 ***					
19. 15	2. 25 ***							
		12. 40	·0955					
20. 15	0. 10	13. 6	·0970 ***					
21. 20	0. 10							
21. 50	3. 5	14. 45	·0957 ***					
22. 5	3. 10							
23. 59	11. 45	16. 39	·0959 ***					
		17. 56	·0963 ***					
		19. 45	·0959 ***					
		21. 43	·0945					
		22. 7	·0934 ***					
		23. 59	·0933					
May 1		May 1		May 1		May 1		
0. 0	21. 11. 55	0. 0	·0933	0. 0	·02143 ***	0. 0	54 ·7	55 ·0
0. 10	12. 35	1. 18	·0935			1. 0	56 ·0	56 ·0
1. 0	13. 0	1. 46	·0930	2. 7	·02032 ***	2. 0	56 ·8	57 ·0
2. 0	12. 0	2. 12	·0951			3. 0	57 ·8	58 ·3
2. 10	15. 0	2. 44	·0936	3. 36	·01820 ***	4. 0	58 ·5	58 ·5
2. 45	13. 10	3. 17	·0945			6. 0	58 ·5	58 ·7
4. 45	12. 0 ***	3. 38	·0938 ***	7. 20	·01847	9. 0	58 ·0	59 ·0
				7. 45	·01890	12. 0	56 ·6	57 ·0
6. 52	7. 45 ***	4. 37	·0948	11. 6	·01843	18. 0	51 ·2	52 ·0
		4. 45	·0952	14. 35	·02004	20. 0	50 ·5	51 ·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

HORIZONTAL FORCE.—April 25. The times are approximate only, and may be from two minutes to three minutes in error.

HORIZONTAL FORCE.—April 27. The times are approximate only, and may be from ten minutes to fifteen minutes in error.

Greenwich Mean Solar Time.	Western Declination.
May 1	
h m	° ′ ″
13. 30	21. 7. 0
14. 55	7. 0
16. 0	8. 30
	***
19. 5	3. 35
20. 20	0. 0
23. 0	8. 5
23. 59	11. 0
May 2	
0. 0	21. 11. 0
1. 30:	13. 30
5. 0:	10. 40
7. 0	7. 35
10. 13	8. 15
10. 55	6. 0
12. 25	8. 0
13. 15	3. 35
15. 0	6. 45
17. 7	5. 0
17. 55	7. 0
19. 45:	2. 45
21. 20	8. 30
23. 59	14. 35
May 3	
0. 0	21. 14. 35
	***
3. 0:	9. 25
6. 0:	8. 0
10. 40	10. 25
11. 32	9. 0
12. 0	10. 30
12. 55	8. 0
15. 0	8. 0
	***
18. 45	1. 5
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 1	
h m	
5. 5	·0945
5. 37	·0953
5. 50	·0945
6. 25	·0942
6. 46	·0948
6. 51	·0955
7. 26	·0946
	***
10. 37	·0950
	***
14. 2	·0961
	***
15. 45	·0961
	***
18. 10	·0967
18. 47	·0971
20. 40	·0965
23. 7	·0941
23. 20	·0944
23. 59	·0937
May 2	
0. 0	·0937
	***
1. 0	·0930
2. 57	·0939
3. 16	·0935
	***
5. 40	·0940
6. 49	·0943
7. 12	·0951
7. 44	·0944
	***
10. 37	·0955
11. 0	·0951
	***
12. 46	·0957
	***
14. 45	·0955
	***
17. 12	·0967
	***
20. 6	·0975
	***
23. 7	·0949
	(†)
May 3	
1. 0	(†)
	·0944*
1. 56	·0942
2. 45	·0940
3. 34	·0947
3. 43	·0944
4. 6	·0948
4. 23	·0943
4. 56	·0951
5. 30	·0947
7. 16	·0956

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 1	
h m	
17. 29	·02263
21. 8	·02702
23. 47	·02580
23. 59	·02607
May 2	
0. 0	·02607
4. 40	·01921
7. 45	·01837
	·01892
14. 7:	·02130
17. 56	·02532
20. 42	·02710
21. 11	·02678
	·02202
23. 59	·02290
May 3	
0. 0	·02290
0. 57	·02208
2. 36:	·02127
4. 17	·01948
5. 12	·01907
	·01974
8. 26:	·01890
12. 45	·02196
17. 25	·02683
19. 4	·02658
	·02501
	***

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 1		
h m	°	°
21. 0	51 ·0	51 ·6
22. 0	51 ·9	52 ·6
23. 0	53 ·0	53 ·7
May 2		
0. 0	54 ·0	54 ·6
1. 0	56 ·8	56 ·3
2. 0	57 ·6	57 ·4
3. 0	58 ·3	58 ·3
9. 0	58 ·5	58 ·4
21. 0	53 ·0	53 ·6
May 3		
1. 0	57 ·0	56 ·8
3. 0	59 ·0	58 ·4
9. 0	56 ·2	57 ·0
21. 0	47 ·7	49 ·0

Greenwich Mean Solar Time.	Western Declination.
May 3	
h m	° ′ ″
20. 35	0. 15
23. 59	14. 30
May 4	
0. 0	21. 14. 30
0. 8	14. 10
0. 15	17. 0
1. 0	15. 0
	***
1. 30	16. 15
	***
3. 14	14. 0
3. 32	15. 10
4. 0	13. 0
	***
5. 0	12. 30
6. 36	7. 35
6. 53	4. 20
7. 7	6. 0
7. 38	8. 15
7. 58	6. 0
8. 10	8. 10
	***
9. 25	8. 0
9. 40	2. 0
10. 5	6. 0
10. 55	3. 35
11. 45	4. 0
12. 10	6. 5
12. 35	4. 30
13. 40	9. 0
15. 15	7. 30
16. 6	7. 10
16. 40	5. 15
16. 54	21. 6. 40
	***
19. 30	20. 59. 0
20. 40	21. 4. 0
20. 53	3. 0
	***
23. 8	6. 0
23. 25	15. 0
23. 59	16. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 3	
h m	
7. 42	·0955
	***
12. 38	·0964
	***
14 6	·0960
	***
16. 17	·0967
	***
20. 43	·0964
21. 56	·0949
22. 42	·0947
	(†)
May 4	
	(†)
1. 0	·0950*
3. 0	·0952*
4. 33	·0971
5. 4	·0946
	***
5. 42	·0943
5. 56	·0967
6. 19	·0952
6. 46	·0955
	***
7. 20	·0947
7. 26	·0954
7. 46	·0939
8. 6	·0940
8. 18	·0950
8. 34	·0965
8. 46	·0955
9. 8	·0967
9. 33	·0962
	***
10. 27	·0976
	***
11. 53	·0964
	***
12. 52	·0966
13. 5	·0974
13. 11	·0968
	***
13. 47	·0966
14. 3	·0972
14. 20	·0963
	***
16. 0	·0973
	***
19. 40	·0968
20. 25	·0950
	***
21. 34	·0942
22. 6	·0930
22. 45	·0935
23. 30	·0931
23. 55	·0942
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 3	
h m	
22. 34	·02572
	***
23. 59	·02183
May 4	
0. 0	·02183
0. 37	·02163
	(†)
4. 56	·01910
10. 13:	·01713
20. 41	·02430
23. 59	·02471

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 4		
h m	°	°
1. 0	50 ·0	50 ·6
3. 0	52 ·5	52 ·3
9. 0	52 ·7	53 ·6
21. 15	48 ·2	48 ·3

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 5		May 5		May 5		May 5		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 16. 35		(†)	0. 0	·02471	8. 36	53·8	54·2
1. 0	19. 0	2. 16	·0947	2. 35	·02322	21. 0	49·3	50·2
1. 30	18. 0		***	4. 48	·02123			
	***	3. 45	·0954	11. 10:	·01728			
4. 50	13. 0		***	17. 7	·01990			
7. 0	4. 50	4. 43	·0942	19. 55	·02230			
8. 28	7. 45	5. 4	·0948	23. 59	·02289			
9. 13	4. 25		***					
9. 50	6. 10	6. 8	·0945					
10. 15	4. 30	6. 20	·0956					
10. 55	7. 0	6. 51	·0935					
11. 15	5. 30	7. 37	·0953					
	***	8. 3	·0956					
13. 10	7. 0	8. 16	·0949					
13. 40	9. 0	8. 45	·0952					
	***	9. 14	·0943					
17. 30	7. 50	9. 42	·0946					
19. 51	1. 45	10. 4	·0955					
22. 15	6. 0		***					
23. 59	11. 0	10. 55	·0950					
			***					
		11. 40	·0953					
		11. 46	·0958					
		12. 5	·0955					
		12. 24	·0958					
		12. 43	·0968					
		12. 50	·0963					
		13. 7	·0966					
		13. 17	·0958					
		14. 8	·0953					
		18. 33	·0961					
		20. 0	·0961					
		22. 45	·0941					
		23. 59	·0941					
May 6		May 6		May 6		May 6		
0. 0	21. 11. 0	0. 0	·0941	0. 0	·02289	1. 0	53·3	53·5
1. 18	13. 0		***	2. 18	·02120	3. 0	55·8	56·3
2. 17	13. 30	0. 50	·0940		***	9. 0	56·8	57·2
2. 39	11. 30		***	5. 0	·01762	21. 0	48·2	49·2
	***	1. 18	·0950	11. 35	·01813			
3. 44	9. 30		***	13. 26	{·01912			
6. 20:	6. 0	2. 10	·0940		{·01983			
9. 15	7. 0		***	19. 45	·02710			
9. 40	21. 6. 0	5. 7	·0936	23. 59	·02608			
10. 0	20. 58. 10	5. 30	·0941					
10. 16	21. 3. 30	6. 5	·0937					
11. 31	2. 30		***					
13. 0	8. 50	9. 56	·0940					
	***	10. 8	·0951					
14. 8	9. 0	10. 37	·0945					
14. 40	7. 0		***					
15. 30:	8. 0	12. 42	·0941					
	***		***					
18. 30	4. 0	14. 17	·0955					
19. 4	1. 10		***					
	***	18. 5	·0961					
21. 30:	6. 0		***					
23. 59	15. 0	19. 43	·0956					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 6 h m		h m		h m	″	°
		20. 17	·0948					
		21. 6	·0955					
			***					
		23. 5	·0943					
		23. 59	·0949					
May 7		May 7		May 7		May 7		
0. 0	21. 15. 5	0. 0	·0949	0. 0	·02608	1. 0	51·7	52·0
0. 55	17. 0	2. 42	·0955	2. 0	·02610	3. 0	53·0	53·8
1. 45	14. 45	2. 57	·0952	6. 0	·02230	9. 0	53·0	53·8
3. 55	13. 0	4. 4	·0955	10. 16:	·02185	20. 0	48·0	48·0
4. 36	11. 0	4. 17	·0959	20. 7	·02648	21. 0	47·2	47·2
4. 45	8. 0	4. 50	·0952	21. 20	{·02603	22. 0	47·6	48·5
10. 0	6. 30		***		{·02532	23. 0	48·0	48·8
	***	6. 42	·0957	23. 18	·02590			
11. 35	8. 5	7. 16	·0954		(†)			
12. 40	6. 0		***					
14. 20	8. 0	9. 17	·0961					
	***		***					
17. 50	5. 30	11. 45	·0958					
19. 6	3. 0		***					
19. 20	0. 30	14. 16	·0964					
19. 45	1. 0		***					
21. 40	7. 30	20. 8	·0967					
22. 5	6. 30		***					
23. 30	14. 45	20. 47	·0962					
23. 59	14. 0		***					
		22. 46	·0964					
			***					
		23. 32	·0972					
			***					
		23. 59	·0969					
May 8		May 8		May 8	(†)	May 8		
	(†)	0. 0	·0969		·02362	0. 0	48·0	48·6
0. 45	21. 14. 30	0. 33	·0961	0. 36	{·02383	1. 0	48·0	48·8
1. 30	15. 0		(†)		{·02096	2. 0	49·4	50·2
2. 15	12. 0	1. 0	·0957*	1. 17	·01622	3. 0	51·1	51·8
	***	3. 0	·0967*	9. 48	·01630	4. 0	51·3	51·5
4. 30	10. 0	5. 30	·0985	11. 20	·01572	6. 0	52·2	52·4
4. 46	13. 0	6. 17	·0964	12. 46	·02103	9. 0	53·8	53·2
5. 27	9. 15	7. 5	·0977	21. 6	(†)	12. 0	53·5	53·0
	***	7. 37	·0967			18. 0	49·0	49·0
7. 15	5. 0	8. 0	·0974			20. 0	49·0	48·6
10. 20	3. 0	8. 45	·0962			21. 0	49·0	48·7
11. 54	0. 0	9. 40	·0969			22. 0	49·7	49·4
12. 10	11. 0	9. 46	·0963			23. 0	50·2	50·2
12. 30	10. 55	10. 35	·0961					
13. 10	8. 15	11. 14	·0953					
13. 50	5. 20	11. 42	·0958					
14. 15	4. 0	11. 53	·0965					
14. 50	5. 0	12. 10	·0955					
15. 4	4. 0	12. 34	·0963					
15. 20	5. 45	12. 50	·0986					
17. 2	6. 0	13. 17	·0978					
17. 45	4. 0	13. 29	·0980					
18. 0	0. 35	14. 6	·0970					
18. 23	4. 0	15. 30	·0969					
18. 45	1. 45	18. 36	·0981					
	***	21. 45	·0951					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 8								
h m	° ′ ″	h m		h m		h m	°	°
19. 45	21. 0. 0	23. 15	·0952					
22. 30	8. 0		(†)					
23. 59	14. 5							
May 9		May 9		May 9		May 9		
0. 0	21. 14. 10		(†)		(†)	0. 0	51 ·5	51 ·5
1. 0	15. 40	1. 0	·0960*	1. 0	·01980*	1. 0	52 ·2	52 ·2
	***	3. 0	·0962*	1. 45	·01945	3. 0	54 ·0	54 ·0
2. 10	13. 0	3. 6	·0961	5. 46	·01603	9. 0	55 ·5	54 ·3
2. 25	14. 0	3. 55	·0967	11. 43	·01590	21. 0	50 ·0	50 ·2
4. 0	10. 0	4. 13	·0975	13. 47	·01662			
5. 0:	7. 35	5. 0	·0970	19. 36	·02301			
7. 45:	8. 0	5. 46	·0972	22. 26	{·02409			
9. 0	6. 35	6. 30	·0980		{·02540			
9. 24	7. 0	6. 45	·0974	23. 0	{·02536			
10. 10	4. 30	7. 6	·0977		{·01936			
11. 50	6. 40	7. 45	·0974	23. 59	·01936			
12. 2	10. 5	8. 15	·0978					
13. 52	5. 0		***					
14. 10	6. 45	9. 7	·0974					
15. 19	3. 20	9. 21	·0981					
	***	9. 40	·0978					
17. 20	5. 0		***					
	***	11. 3	·0980					
20. 0	3. 0		***					
21. 0:	4. 25	11. 56	·0985					
22. 30	11. 0	12. 15	·0996					
23. 59	15. 0		***					
		13. 15	·0999					
		13. 50	·0992					
			***					
		15. 7	·0996					
		15. 38	·0991					
			***					
		18. 56	·0998					
			***					
		21. 53	·0983					
		22. 14	·0976					
		22. 26	·0982					
		22. 55	·0975					
		23. 26	·0980					
		23. 50	·0976					
		23. 59	·0980					
May 10		May 10		May 10		May 10		
0. 0	21. 15. 5	0. 0	·0980	0. 0	·01936	1. 0	52 ·0	52 ·4
1. 0	16. 0	0. 16	·0983	2. 37	·01863	3. 0	53 ·0	53 ·8
2. 35	14. 30		(†)	9. 46:	·01554	9. 0	53 ·0	53 ·6
6. 45:	7. 30	1. 0	·0980*	16. 7	·01810	21. 0	48 ·0	50 ·2
8. 30	7. 0	2. 17	·0986	19. 43	·02012			
8. 47	3. 0	2. 40	·0983	21. 30	{·02072			
9. 17	8. 0	3. 15	·0996		{·01986			
9. 30	5. 0	3. 46	·0991	23. 59	·02007			
9. 45	6. 30		***					
	***	6. 17	·1000					
12. 30	4. 10		***					
13. 0	6. 0	7. 42	·0994					
15. 0:	6. 0		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 10		May 10						
h m	° ′ ″	h m		h m		h m	°	°
15. 45	21. 5. 55	9. 22	·1002					
16. 25	3. 0		***					
16. 55	4. 0	9. 46	·0998					
18. 30:	0. 15	10. 5	·1003					
19. 15	3. 0	10. 42	·0994					
20. 39	3. 35	11. 7	·0999					
21. 44	6. 0	11. 56	·0996					
23. 59	14. 30	12. 34	·1001					
		13. 30	·1000					
		14. 42	·1008					
		15. 45	·1004					
		16. 20	·1012					
		16. 45	·1005					
		17. 17	·1008					
			***					
		19. 45	·1001					
		20. 17	·1002					
		21. 36	·0993					
		22. 38	·1000					
		23. 5	·0994					
		23. 20	·0997					
		23. 45	·0993					
		23. 59	·0995					
May 11		May 11		May 11		May 11		
0. 0.	21. 14. 30	0. 0	·0995	0. 0	·02007	1. 0	52 ·5	52 ·4
1. 10	15. 0	0. 8	·0997	2. 8	·01910	3. 0	54 ·7	54 ·8
2. 0	12. 40	0. 20	·0993	7. 0	·01620	9. 0	55 ·2	55 ·2
	***		(†)	12. 45:	·01568	22. 15	53 ·0	54 ·0
3. 40	11. 0	1. 0	·0992*	18. 10	·01712			
4. 15	8. 35	3. 0	·1002*	23. 59	·01807			
6. 40:	7. 0	9. 0	·1004*					
11. 8	4. 50	22. 15	·0998*					
11. 47	5. 45							
12. 15	4. 0							
13. 0	5. 30							
14. 15	5. 35							
14. 46	6. 0							
16. 45	3. 0							
17. 20	4. 0							
17. 43	1. 45							
	***							
19. 11	2. 15							
20. 15	0. 35							
21. 0	1. 15							
23. 5	8. 0							
23. 59	12. 10							
May 12		May 12		May 12		May 12		
0. 0	21. 12. 15	0. 0	·1001	0. 0	·01807	8. 0	59 ·5	59 ·5
0. 40	14. 0	0. 42	·1000		***	21. 0	52 ·6	53 ·0
0. 48	15. 35	0. 49	·1008	1. 45	·01770			
1. 30	14. 30	1. 28	·0996		***			
2. 0:	15. 15		***	4. 45	·01523			
4. 15	10. 0	3. 19	·1005		***			
5. 30	9. 45		***	6. 20	·01546			
7. 30	6. 35	4. 2	·1003	6. 46	·01658			
12. 20	9. 15	4. 46	·1011	13. 26:	·01783			
14. 22	6. 0	4. 56	·1017	18. 37	·02196			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 12		May 12		May 12				
h m	° ′ ″	h m		h m		h m	°	°
14. 46	21. 3. 55	5. 35	·1007	22. 17	·02443			
15. 15	5. 30		***		·02396			
15. 51	4. 0	6. 46	·1011	23. 59	·02407			
	***		***					
17. 15	3. 40	9. 30	·1011					
17. 40	7. 35	9. 48	·1007					
18. 0	4. 30	10. 9	·1012					
18. 21	1. 30	10. 25	·1007					
	***	11. 17	·1008					
19. 26	0. 15	11. 42	·1004					
	***	12. 3	·1011					
20. 54	1. 45	12. 17	·1006					
21. 28	5. 0	14. 8	·1012					
21. 40	3. 30	14. 17	·1015					
	***	14. 38	·1011					
23. 27	12. 55	16. 45	·1013					
23. 45	12. 0	17. 20	·1005					
23. 59	14. 0	18. 17	·1016					
			***					
		19. 16	·1008					
		19. 43	·1010					
			***					
		20. 56	·0997					
		21. 17	·1000					
		21. 42	·0993					
		22. 17	·0990					
		23. 22	·0996					
			(†)					
May 13		May 13		May 13		May 13		
0. 0	21. 14. 0		(†)	0. 0	·02407	1. 0	55·0	55·0
0. 14	14. 50	1. 0	·0992*	1. 45	·02402	3. 0	56·6	56·4
	***	3. 0	·0997*	6. 0	·02108	9. 0	57·5	57·1
4. 0	9. 20	4. 50	·0996	10. 16:	·01970	21. 0	51·7	50·4
5. 10	7. 0	5. 47	·1000	16. 55	·02531			
	***	6. 28	·1003		***			
7. 15	4. 0	6. 45	·1000	20. 56	·02490			
	***	7. 7	·1009	23. 59	·02231			
9. 20	6. 0	8. 5	·1002					
	***	9. 34	·1005					
10. 45	6. 0	10. 15	·1003					
11. 0	2. 35		***					
11. 25	2. 0	10. 46	·1010					
11. 44	8. 0	10. 57	·1007					
11. 55	5. 0	11. 15	·1028					
12. 2	6. 0	11. 46	·1004					
12. 36	3. 0	12. 2	·1017					
14. 35:	6. 0	12. 26	·1011					
15. 45	5. 0	12. 43	·1014					
15. 55	7. 0	13. 10	·1007					
16. 30	5. 30		***					
16. 44	7. 30	14. 20	·1005					
	***		***					
18. 44	1. 40	16. 29	·1014					
19. 10	21. 1. 40		***					
19. 23	20. 59. 0	18. 5	·1013					
20. 27	21. 6. 0		***					
21. 30	3. 25	19. 4	·1004					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 13		May 13						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	21. 11. 25	19. 55	·1026					
		20. 29	·1018					
			***					
		22. 5	·1012					
		22. 42	·1005					
			(†)					
May 14		May 14		May 14		May 14		
0. 0	21. 11. 20		(†)	0. 0	·02231	1. 0	57·4	57·3
0. 36	12. 0	1. 0	·1004*	0. 45	·02042	3. 0	61·2	61·5
	***	1. 15	·1004	1. 9	·02013	9. 0	63·0	63·0
1. 57	11. 25		***	2. 46	·01702	20. 0	56·5	57·0
3. 0	9. 0	2. 6	·0996	7. 17	·01876	21. 0	57·0	58·0
5. 30:	7. 0		***	10. 40	·01896	22. 0	58·0	58·6
9. 5	6. 15	3. 27	·1009	19. 56	·02576	23. 0	58·8	59·2
9. 30	2. 0	7. 6	·1016	22. 40	·02690			
	***	9. 26	·1017	23. 8	·02663			
12. 55	6. 40	9. 48	·1023		(†)			
	***		***					
15. 10	7. 30	11. 8	·1017					
15. 30	11. 45		***					
16. 15	5. 30	15. 13	·1030					
17. 55	1. 40	15. 29	·1026					
18. 10	2. 35	16. 16	·1033					
18. 30	2. 30	17. 45	·1037					
18. 57	0. 30	18. 13	·1041					
	***	18. 50	·1037					
19. 45	1. 45	19. 50	·1043					
21. 10	2. 25	22. 50	·1012					
22. 40	7. 30		(†)					
22. 49	7. 0							
23. 59	11. 0							
May 15		May 15		May 15		May 15		
0. 0	21. 11. 0		(†)		(†)	0. 0	60·8	61·5
1. 15	12. 30	1. 0	·1010*	0. 30	·02500	1. 0	61·9	62·3
3. 50:	10. 10	1. 26	·1002	1. 37	·02396	2. 0	63·3	63·8
6. 10	6. 30	3. 50	·1015	4. 6	·01823	3. 0	65·0	65·5
7. 40	6. 15		(†)		***	4. 0	65·5	66·5
8. 25	2. 10	5. 50	·1018	10. 45	·01910	6. 0	66·6	66·8
9. 45:	7. 0	6. 12	·1025	12. 43	·02009	9. 8	67·3	67·2
11. 50	7. 0	6. 40	·1015	18. 56	·02602	12. 0	66·8	66·8
	(†)	7. 38	·1028		***	18. 0	60·0	60·4
17. 7	6. 25	8. 37	·1007	23. 59	·02523	20. 0	60·5	60·5
	***	11. 26	·1021			21. 0	60·7	60·0
18. 30	21. 4. 30		***			22. 0	61·2	60·9
	***	13. 47	·1029			23. 0	61·7	61·2
19. 41	20. 58. 5	14. 18	·1034					
	***	14. 47	·1033					
20. 40	21. 5. 10	14. 57	·1037					
21. 0	2. 10	15. 5	·1030					
	***	15. 17	·1040					
22. 44	10. 35		***					
22. 54	9. 5	18. 10	·1037					
23. 25	16. 30		(†)					
23. 59	18. 0	21. 0	·1093*					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 16		May 16		May 16		May 16		
h m	° ′ ″	h m		h m		h m	°	°
0. 3	21. 16. 0		(†)	0. 0	·02523	0. 0	62·7	62·6
1. 15	19. 30	1. 0*	·1064	0. 47	·02465	1. 0	64·8	64·8
1. 37	19. 0	2. 45	·1059		***	2. 0	66·4	66·4
1. 47	21. 0	2. 56	·1070	3. 18	·02042	3. 0	67·8	67·9
2. 16	18. 35	3. 7	·1063	4. 2	·01850	4. 0	68·5	69·0
2. 25	20. 30	3. 37	·1078		***	9. 0	69·6	69·7
3. 15	9. 0	4. 7	·1046	7. 15	·01834	21. 0	61·0	61·0
	***	4. 40	·1068	7. 20	·01882			
4. 30	12. 5		***	8. 28	{ ·01830			
	***	5. 17	·1059		{ ·01927			
5. 45	9. 25	5. 45	·1087	10. 6	·01882			
6. 10	5. 0	6. 7	·1084	10. 17	·01810			
6. 50	4. 25	6. 15	·1089		***			
7. 25	8. 0	6. 44	·1079	12. 22	·02015			
8. 25	6. 0	7. 5	·1091	12. 46	·02010			
9. 0:	9. 0	7. 45	·1089		***			
9. 45	0. 10	7. 49	·1093	16. 37	·02522			
9. 51	21. 1. 35		***		***			
9. 55	20. 56. 30	8. 18	·1083	22. 35	·02476			
10. 14	21. 16. 10	8. 46	·1099		***			
10. 35	20. 53. 35		***	23. 59	·02480			
11. 5	59. 45	9. 45	·1086					
11. 38	20. 55. 0	9. 48	·1100					
11. 55	21. 0. 0	9. 52	·1093					
12. 9	20. 58. 10	10. 6	·1119					
12. 30	21. 3. 0	10. 22	·1044					
12. 55	3. 0	10. 46	·1089					
	***		***					
14. 5	10. 35	11. 33	·1070					
14. 24	6. 0	12. 17	·1086					
14. 55	9. 30	12. 46	·1064					
	***	13. 20	·1088					
15. 24	5. 0	13. 52	·1096					
15. 40	7. 0	14. 7	·1090					
15. 50	2. 45	15. 8	·1101					
	***	15. 16	·1098					
16. 20	12. 0	15. 33	·1108					
	***	15. 43	·1086					
17. 45	2. 0		***					
	***	16. 0	·1076					
18. 2	4. 45		***					
	***	17. 7	·1097					
18. 45	1. 0		***					
	***	20. 7	·1090					
21. 0	1. 45		***					
	***	21. 22	·1068					
22. 45	9. 0	21. 40	·1074					
	***	22. 40	·1042					
23. 45	9. 10	23. 8	·1070					
23. 59	12. 45		***					
		23. 39	·1067					
			(†)					
May 17		May 17		May 17		May 17		
0. 0	21. 12. 45	1. 0	·1064*	0. 0	·02480	1. 0	62·0	61·6
	***	3. 0	·1085*		***	3. 0	62·0	61·7
0. 55	13. 5	9. 0	·1099*	8. 27	·02368	9. 0	59·0	60·0
1. 10	11. 0	21. 0	·1106*		***	21. 0	50·0	51·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 17				May 17				
h m	° ′ ″	h m		h m		h m	°	°
2. 5	21. 14. 0			10. 8	·02426			
2. 38	9. 35				***			
3. 0	14. 40			10. 40	·02380			
	***				***			
5. 21	9. 0			16. 16	·02392			
5. 30	21. 5. 35			21. 7	{ ·02396			
	***				{ ·02322			
6. 0	20. 59. 0				***			
6. 13	21. 2. 35			23. 59	·02290			
6. 26	1. 10							
7. 0	5. 0							
7. 15	3. 30							
7. 22	21. 5. 0							
8. 0	20. 49. 50							
8. 23	21. 2. 50							
8. 36	0. 25							
8. 46	2. 10							
9. 0	0. 10							
9. 15	21. 1. 30							
9. 26	20. 59. 0							
10. 0	21. 5. 35							
10. 13	20. 58. 0							
10. 22	21. 2. 0							
10. 37	20. 57. 0							
11. 3	21. 6. 0							
11. 27	7. 35							
12. 25	2. 15							
12. 44	12. 35							
13. 0	9. 0							
13. 45	9. 0							
14. 35	4. 20							
15. 20	5. 20							
16. 0	8. 15							
	***							
18. 45	3. 0							
	***							
22. 15	7. 0							
	(†)							
May 18		May 18		May 18		May 18		
	(†)	1. 0	·1095*	0. 0	·02290	1. 0	53·0	53·7
0. 30	21. 12. 20	3. 0	·1097*	1. 50	·02228	3. 0	54·6	55·0
	***	9. 0	·1111*	6. 48	·01450	9. 0	58·2	58·7
2. 6	12. 50	21. 10	·1100*		***	21. 10	50·4	51·0
2. 35	14. 45			8. 20	·01483			
2. 52	13. 0			8. 46	·01417			
	***			10. 37	·01463			
4. 50	8. 15			11. 0	·01442			
5. 3	10. 35				***			
5. 20	6. 5			13. 35	·01583			
6. 0	9. 10			19. 37	·02443			
	***			21. 33	{ ·02408			
7. 23	21. 6. 45				{ ·02342			
7. 41	20. 58. 10			23. 59	·02285			
8. 0	20. 58. 10							
8. 32	21. 11. 0							
9. 0	2. 0							
9. 25	4. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
May 18 h m	° ′ ″
10. 0	21. 0. 15
10. 40	10. 55
10. 54	4. 30
11. 10	6. 30
11. 39	3. 20
12. 38	7. 0
12. 49	6. 0
13. 7	11. 30
14. 2	0. 30
14. 35	21. 3. 0
14. 55	20. 59. 40
15. 38	21. 2. 40
15. 52	2. 0
16. 25	3. 0
16. 50	2. 20
17. 8	5. 0
17. 46	4. 35
18. 0	6. 20
18. 36	5. 0
19. 10	0. 35
19. 35	21. 2. 30
19. 54	20. 59. 30
	***
22. 30	21. 8. 5
23. 59	14. 10
May 19	
0. 0	21. 14. 10
1. 25	14. 50
1. 46	13. 0
2. 14	14. 15
2. 28	13. 10
3. 0	13. 40
3. 45	8. 15
4. 25	9. 35
	***
5. 20	7. 10
5. 27	8. 30
5. 54	3. 0
6. 30	7. 30
7. 0	6. 0
8. 58	5. 30
9. 15	2. 0
9. 25	6. 40
9. 40	1. 45
11. 0	5. 0
	***
12. 40	1. 20
13. 15	6. 50
13. 31	5. 30
14. 14	8. 25
15. 13	8. 0
16. 0	5. 0
17. 7	5. 0
	***
18. 55	1. 45
19. 40	4. 0
20. 45:	4. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 19	
8. 34	·1112*
21. 8	·1151*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 19	
0. 0	·02285
2. 17	·02221
6. 36	·01446
	***
11. 37	·01470
	***
15. 8	·01708
	***
19. 45	·02223
22. 30	·02440
23. 59	·02438

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 19		
8. 34	61 ·0	60 ·7
21. 8	52 ·5	53 ·2

Greenwich Mean Solar Time.	Western Declination.
May 19 h m	° ′ ″
23. 7:	21. 11. 15
23. 59	12. 45
May 20	
0. 0	21. 12. 55
0. 43	14. 30
1. 42	13. 30
6. 40	4. 40
7. 25	6. 0
7. 55	1. 45
9. 0	5. 0
9. 20	1. 40
9. 50	4. 50
14. 40	7. 25
15. 20	4. 20
16. 45	3. 0
	***
20. 30:	1. 0
23. 59	10. 20
May 21	
0. 0	21. 10. 20
1. 40:	9. 50
4. 55	7. 20
6. 45	3. 0
	***
11. 48	3. 0
13. 0	5. 0
15. 55	0. 30
17. 8	1. 0
17. 55	2. 20
18. 24	0. 30
20. 40	1. 0
23. 45	10. 0
23. 59	5. 15
May 22	
0. 0	21. 5. 15
0. 25	7. 0
0. 40	6. 0
2. 10	6. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 20	
1. 0	·1155*
3. 0	·1170*
9. 0	·1157*
21. 0	·1140*
May 21	
1. 0	·1138*
1. 50	·1139
2. 20	·1137
3. 0	·1143
	***
3. 57	·1140
	***
5. 35	·1159
	***
8. 30	·1137
8. 56	·1140
	***
10. 27	·1135
	***
11. 6	·1141
11. 49	·1136
13. 0	·1146
13. 45	·1147
14. 18	·1158
14. 51	·1151
15. 33	·1154
16. 16	·1150
18. 5	·1150
20. 22	·1140
	***
21. 45	·1143
22. 3	·1134
23. 45	·1143
	(†)
May 22	
1. 0	·1147*
3. 0	·1150*
9. 0	·1130*
21. 0	·1141*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 20	
0. 0	·02438
2. 6	·02209
5. 5	·01470
	·01502
8. 17	·01650
	***
10. 6	·01623
	·01678
10. 50	·01608
	·01662
12. 26	·01627
	·01690
15. 45:	·01830
17. 36	·02022
21. 30	·02388
23. 59	·02375
May 21	
0. 0	·02375
1. 15	·02270
4. 17	·01678
	***
8. 55	·01610
9. 8	·01672
10. 12	·01623
12. 6	·01660
	·01763
14. 45	·01910
19. 15	·02483
21. 36	·02436
	·02271
23. 59	·02320
May 22	
0. 0	·02320
3. 42	·02377
8. 4	·02263
9. 43	·02250

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 20		
1. 0	56 ·6	57 ·5
3. 0	61 ·0	61 ·4
9. 0	69 ·0	70 ·0
21. 0	63 ·3	62 ·5
May 21		
1. 0	66 ·3	66 ·8
3. 0	68 ·0	69 ·0
9. 0	71 ·9	72 ·5
21. 0	63 ·2	63 ·2
22. 0	63 ·5	63 ·7
23. 0	63 ·7	64 ·2
May 22		
0. 0	64 ·2	65 ·0
1. 0	65 ·0	65 ·5
2. 0	65 ·4	65 ·9
3. 0	65 ·7	66 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

HORIZONTAL FORCE.—May 18, 19, 20, and 22. The Photographic Traces on these days were either entirely lost, or so faint they could not be used.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 22 h m	° ′ ″	h m		May 22 h m		May 22 h m	°	°
7. 0	21. 0. 15			13. 0:	·02203	4. 0	66·0	66·2
8. 17	21. 0. 0			16. 35	·02398	6. 0	66·9	67·2
8. 55	20. 58. 25				***	9. 0	67·7	67·8
10. 0:	21. 0. 0			19. 46	·02340	12. 0	67·2	67·4
11. 15	20. 59. 40			20. 27	·02376	18. 0	62·7	63·2
13. 0	59. 0				(†)	20. 0	62·5	63·0
14. 15	59. 50			21. 0	·02246*	21. 0	62·8	63·5
17. 0	57. 30					22. 0	64·8	64·9
17. 30	59. 0					23. 0	66·0	66·0
17. 50	57. 20							
18. 30	58. 0							
19. 5	20. 56. 10							
21. 30	21. 2. 40							
22. 25	3. 30							
22. 45	10. 30							
23. 10	13. 40							
23. 59	11. 40							
May 23		May 23		May 23		May 23		
0. 0	21. 11. 40	0. 0	·1136	0. 0	·02132	0. 0	67·5	67·2
0. 25	12. 50	0. 11	·1137	1. 35	·02021	1. 0	68·5	68·6
1. 14	9. 10	0. 33	·1127	4. 43	·01450	2. 0	70·6	70·5
1. 40	12. 15	0. 47	·1127		***	3. 0	72·3	71·7
2. 18	9. 0	1. 7	·1120	11. 37	·01537	4. 0	73·0	73·0
2. 32	11. 0		***	13. 38	·01650	9. 0	72·6	73·5
	***	3. 55	·1126	17. 44	·02375	21. 0	60·8	58·6
3. 40	21. 7. 0	4. 18	·1144		***			
	***	4. 46	·1137	23. 59	·02273			
7. 0	20. 58. 0	5. 8	·1143					
7. 10	21. 0. 0	5. 45	·1132					
7. 25	20. 57. 20		***					
	***	7. 13	·1140					
9. 10	20. 56. 30	7. 22	·1137					
	***	7. 45	·1150					
10. 18	21. 1. 10		***					
10. 45	20. 59. 0	10. 44	·1140					
	***	11. 13	·1168					
12. 22	20. 57. 0	11. 32	·1157					
13. 25	21. 0. 0		***					
	***	12. 47	·1149					
17. 25	20. 55. 0	12. 56	·1156					
	***	13. 12	·1146					
19. 0	55. 0	15. 26	·1152					
	***	18. 20	·1151					
20. 0	20. 51. 35	19. 5	·1142					
	***	20. 18	·1136					
22. 0	21. 1. 10		***					
23. 59	5. 15	21. 47	·1122					
			***					
		23. 59	·1137					
May 24		May 24		May 24		May 24		
0. 0	21. 5. 15	0. 0	·1137	0. 0	·02273	1. 0	61·8	60·7
2. 10:	7. 10	1. 46	·1138	0. 45	·02276	3. 0	63·5	63·5
6. 0	21. 2. 20	2. 42	·1147	2. 30	·02100	9. 0	65·5	66·0
	***	3. 12	·1144	6. 40	·01642	21. 0	59·0	56·8
7. 40	20. 57. 10		***	10. 42	·01450			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 24 h m	° ′ ″	May 24 h m		May 24 h m		h m	°	°
8. 0	21. 0. 0	5. 47	·1150	May 24 h m				
	***	6. 16	·1186	12. 6	{·01574			
9. 51	20. 57. 15	6. 47	·1148		·01670			
10. 27	21. 2. 20	7. 0	·1155	16. 11	·02253			
11. 7	20. 58. 15	7. 9	·1149		***			
12. 50	21. 0. 0	7. 20	·1156	21. 36	·02250			
15. 30	20. 59. 40	7. 40	·1155	23. 35	·02214			
16. 5	58. 0	7. 49	·1163		(†)			
17. 25	58. 0	8. 21	·1150					
19. 15	53. 30	8. 48	·1150					
19. 30	55. 0	9. 43	·1141					
20. 10	20. 53. 50		***					
23. 45	21. 6. 25	10. 34	·1158					
23. 59	6. 0	10. 46	·1149					
			***					
		12. 17	·1155					
			***					
		14. 16	·1155					
		14. 30	·1161					
		14. 43	·1155					
			***					
		18. 11	·1162					
			***					
		19. 17	·1148					
			***					
		21. 5	·1136					
		22. 44	·1122					
		23. 59	·1125					
May 25		May 25		May 25		May 25		
0. 0	21. 6. 0	0. 0	·1125	3. 0	– ·01325*	1. 0	61·5	60·3
2. 20:	7. 0		***	9. 0	– ·01015*	3. 0	63·0	62·7
7. 0	0. 35	3. 36	·1142	22. 30	– ·00715*	9. 0	63·8	63·0
7. 45	21. 1. 0	4. 29	·1143			22. 30	59·5	59·0
8. 10	20. 59. 30	5. 2	·1149					
9. 40	21. 1. 0	5. 31	·1143					
10. 0	21. 2. 0	5. 47	·1156					
	***	6. 3	·1148					
11. 0	20. 59. 30	6. 37:	·1155					
11. 15	56. 20	6. 56	·1150					
11. 33	20. 56. 40	7. 12	·1158					
12. 0	21. 1. 30	7. 22	·1151					
12. 20	0. 0	7. 39	·1155					
	***	7. 46	·1145					
14. 10	21. 0. 0	8. 17	·1154					
15. 0	20. 52. 30		***					
15. 30	53. 25	9. 2	·1148					
15. 56	57. 0		***					
15. 15	56. 10	9. 45	·1156					
	***	10. 46	·1149					
19. 30:	57. 30	11. 7	·1158					
20. 30	20. 56. 0	11. 39	·1149					
	***		***					
23. 59	21. 5. 0	12. 47	·1151					
			***					
		14. 8	·1164					
			***					
		15. 55	·1157					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 25. A suspicion had reigned over the results of the Vertical Force for several days, and on this day its box was opened, and the magnet thoroughly examined. It settled so that its spot of light fell off the paper. Its motion seemed to be free, and on May 27 its adjustments were altered so that the spot of light fell properly on the paper.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	May 25 h m		h m		h m	°	°
		18. 17	·1156					
		18. 54	·1138					
			***					
		19. 47	·1144					
			***					
		21. 42	·1134					
		22. 0	·1127					
			***					
		23. 59	·1127					
May 26		May 26		May 26		May 26		
0. 0	21. 5. 0	0. 0	·1127	10. 33	−·01025	10. 33	63·0	64·0
1. 10	8. 35	0. 48	·1141	21. 0	−·00715	21. 0	60·8	58·2
2. 46	21. 8. 30	1. 46:	·1137					
	***	2. 29	·1151					
7. 30	20. 59. 0	2. 47	·1139					
			***					
8. 20	21. 0. 20							
9. 10	20. 59. 0	4. 13	·1154					
10. 55	21. 0. 0	4. 34	·1151					
11. 23	20. 57. 50	5. 0	·1160					
11. 58	21. 0. 30	5. 16	·1151					
14. 32	20. 59. 30	6. 18	·1162					
			***					
15. 35	21. 0. 20							
17. 5	20. 57. 0	7. 18	·1156					
17. 25	58. 0	7. 43	·1166					
	***	8. 6	·1157					
19. 20	52. 0	9. 22	·1154					
19. 35	51. 35	10. 47	·1159					
19. 52	55. 20	11. 22	·1154					
20. 19	20. 51. 0	11. 38	·1160					
21. 10	21. 1. 0	11. 49	·1153					
21. 46	20. 57. 30	12. 17	·1162					
	***		***					
23. 25	21. 7. 30	13. 5	·1155					
23. 40	6. 40	14. 35	·1159					
23. 59	9. 0	17. 46	·1169					
			***					
		19. 45	·1149					
		20. 37	·1119					
			***					
		21. 39	·1123					
			***					
		22. 37	·1112					
			***					
		23. 59	·1125					
May 27		May 27		May 27		May 27		
0. 0	21. 9. 0	0. 0	·1125		(†)	1. 0	63·6	63·8
0. 10	11. 20	0. 18	·1128	1. 0	·01797*	3. 0	66·0	65·8
	***		(†)	1. 47	·01902	9. 0	65·7	65·8
2. 30	11. 10	1. 0	·1127	4. 15:	·02220	21. 6	56·8	57·7
	***	1. 25	·1133		***			
6. 20	21. 2. 0	1. 39	·1123	7. 17	·02296			
6. 46	20. 59. 0	1. 57	·1131	9. 10	·02338			
	***	2. 11	·1127	12. 56	·02572			
8. 20	21. 0. 30	2. 28	·1129	14. 48	·02750			
	***	2. 45	·1121	21. 36	·02183			
10. 50	21. 0. 45	2. 49	·1123	23. 59	·02090			

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May 27 h m	° ′ ″	May 27 h m		h m		h m	°	°
11. 39	20. 57. 50	3. 5	·1121					
12. 40	21. 1. 30	4. 2	·1137					
13. 26	0. 0	4. 25	·1129					
14. 17	2. 30	4. 44	·1133					
14. 50	1. 0	5. 6	·1124					
16. 34	1. 30	5. 25	·1132					
17. 0	4. 0	6. 7	·1130					
17. 16	3. 20	7. 7	·1146					
17. 31	5. 0	7. 29	·1143					
18. 25	2. 0	7. 46	·1149					
19. 30:	21. 0. 0	8. 20	·1144					
21. 25	20. 57. 0		***					
	***	11. 40	·1152					
23. 59	21. 7. 10	12. 17	·1148					
			***					
		12. 46	·1151					
		14. 6	·1150					
		18. 45	·1162					
		19. 10	·1156					
		20. 5	·1156					
		21. 22	·1142					
		21. 48	·1141					
		22. 3	·1148					
		22. 42	·1128					
		23. 59	·1137					
May 28		May 28		May 28		May 28		
0. 0	21. 7. 10	0. 0	·1137	0. 0	·02090	1. 0	57·2	57·5
1. 55	10. 0	1. 0	·1138		***	3. 0	58·0	58·2
	***	2. 3:	·1145	3. 19	·02102	9. 0	58·8	59·0
3. 45	8. 10	2. 46	·1135	10. 43	·02018	20. 0	56·8	56·5
	***	3. 5	·1135	14. 45	·02110	21. 0	57·9	57·2
7. 50	0. 40	3. 20	·1147	15. 16	{·02087	22. 0	58·7	58·2
8. 3	1. 20		***		{·02042	23. 0	59·6	59·1
8. 40	0. 0	3. 47	·1146		***			
9. 40	1. 25	4. 2	·1158	17. 45	·02097			
12. 0	21. 1. 0	4. 18	·1161		***			
13. 22	20. 58. 0	4. 45	·1156	23. 59	·01938			
14. 40	21. 1. 0		***					
15. 44	20. 59. 10	5. 44	·1162					
16. 5	21. 1. 0	6. 10	·1157					
16. 19	20. 59. 20	6. 20	·1163					
16. 40	21. 1. 10	7. 17	·1157					
17. 4	0. 20	7. 46	·1162					
17. 30	4. 15	8. 37	·1153					
18. 13	21. 3. 10		***					
19. 5	20. 58. 45	12. 18	·1152					
19. 50:	59. 30	15. 7	·1151					
21. 0	20. 56. 30		***					
	***	16. 38	·1158					
23. 59	21. 7. 0	17. 6	·1153					
			***					
		18. 27	·1161					
			***					
		19. 42	·1153					
			***					
		20. 17	·1146					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

VERTICAL FORCE.—May 25 and 26. The results have been derived from eye-observations referred to the same zero as on May 24; they are valuable only as indicating the amount of change from one observation to the next.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 28 h m		h m		h m	□	°
		21. 15	·1145					
			***					
		22. 36	·1127					
		23. 59	·1141					
May 29		May 29		May 29		May 29		
0. 0	21. 7. 5	0. 0	·1141	0. 0	·01938	0. 0	60 ·4	60 ·0
2. 2	8. 30		***	2. 20	·01782	1. 0	61 ·2	61 ·0
4. 8	5. 35	2. 30	·1140	4. 18	·01553	2. 0	62 ·5	62 ·5
6. 15:	1. 0	2. 46	·1145	8. 10	·02042	3. 0	63 ·8	64 ·0
	***	3. 0	·1140	14. 6	·02210	4. 0	64 ·8	65 ·0
12. 13	0. 30	4. 6	·1150	20. 2	·02557	6. 0	67 ·2	67 ·5
13. 0	21. 2. 25	4. 28	·1144	22. 0	·02483	9. 0	66 ·5	66 ·2
	***	4. 45	·1147		(†)	12. 0	65 ·0	65 ·0
17. 45	20. 58. 40	5. 49	·1145			18. 0	62 ·8	60 ·6
19. 49	20. 55. 20	6. 16	·1150			20. 0	63 ·7	62 ·0
	***	8. 47	·1138			21. 6	65 ·7	62 ·8
22. 8	21. 2. 0	11. 43	·1141			22. 0	66 ·0	63 ·7
	(†)	13. 20	·1146			23. 0	66 ·2	64 ·3
		13. 47	·1144					
		14. 27	·1147					
		16. 3	·1146					
		16. 37	·1147					
		17. 3	·1144					
		17. 37	·1146					
		17. 48	·1143					
		18. 16	·1146					
		19. 48	·1128					
		21. 30	·1121					
		22. 7	·1110					
			(†)					
May 30		May 30		May 30		May 30		
	(†)		(†)		(†)	0. 0	66 ·5	65 ·0
1. 0	21. 9. 40*	1. 0	·1118*	1. 0	·02153*	1. 0	67 ·7	66 ·4
3. 0	6. 32*	2. 7	·1123	3. 0	·02155*	2. 0	68 ·7	67 ·7
4. 40	21. 2. 0	2. 53	·1127	5. 20	·02100	3. 0	69 ·7	68 ·8
6. 15:	20. 59. 0	4. 47	·1132		***	9. 0	70 ·5	70 ·2
10. 15	21. 0. 0	5. 29	·1127	7. 46	·02122	21. 0	64 ·0	62 ·7
15. 10	21. 2. 40	6. 18	·1133	9. 5	·02103			
18. 15	20. 56. 10	6. 56	·1131	11. 45	·02210			
19. 45:	20. 54. 35	7. 25	·1126	17. 37	·02632			
21. 45	21. 0. 20	8. 16	·1128	23. 59	·02144			
	(†)	8. 45	·1125					
		10. 46	·1132					
		13. 38	·1143					
		16. 15	·1148					
		17. 28	·1147					
		19. 12	·1132					
		20. 46	·1121					
		22. 45	·1118					
		23. 59	·1121					
May 31		May 31		May 31		May 31		
0. 0	21. 4. 30	0. 0	·1121	0. 0	·02144	1. 0	65 ·8	65 ·0
1. 15:	21. 6. 0	3. 43	·1137	6. 0	·01695	3. 0	67 ·0	67 ·3
5. 15:	20. 55. 0	4. 27	·1136	7. 47	·01810	9. 0	69 ·0	68 ·5
8. 36	56. 15	5. 36	·1131	10. 6	·01852	21. 8	65 ·0	63 ·7
13. 15	57. 0	6. 47	·1139	12. 30	·01990			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 31	° ′ ″	May 31		May 31		May 31		
h m		h m		h m		h m	°	°
15. 30	20. 55. 0	8. 16	·1143	17. 3	·02392			
16. 55	51. 40	9. 5	·1137	18. 30	·02223			
	***		***		***			
18. 30	51. 15	13. 47	·1151	21. 11	·02144			
	(†)		***	23. 59	·02090			
21. 0	54. 0	16. 39	·1153					
22. 20:	59. 30		***					
	(†)	18. 46	·1151					
		18. 54	·1144					
			***					
		20. 46	·1130					
		22. 12	·1126					
		23. 37	·1131					
			(†)					
June 1		June 1		June 1		June 1		
	(†)		(†)	0. 0	·02090	1. 0	65 ·8	65 ·0
1. 0	21. 9. 49*	1. 0	·1137*		(†)	3. 0	65 ·6	65 ·2
3. 0	5. 33*	3. 0	·1142*	1. 0	·02081*	9. 0	63 ·5	63 ·4
5. 50	0. 50	5. 45	·1149	3. 0	·02071*	21. 42	59 ·8	59 ·0
15. 10	21. 0. 20		***	5. 20	·02020			
15. 50	20. 59. 50	16. 46	·1164	9. 35	·02136			
18. 0:	54. 45	18. 29	·1161		***			
21. 10	20. 59. 30	19. 45	·1150	18. 17	·02057			
23. 59	21. 4. 0	20. 50	·1149	23. 59	·02030			
		22. 38	·1140					
		23. 59	·1149					
June 2		June 2		June 2		June 2		
0. 0	21. 4. 0	0. 0	·1149	0. 0	·02030	10. 32	60 ·3	60 ·5
2. 15:	5. 30	1. 47:	·1140	1. 5	·01990	21. 0	58 ·0	57 ·6
4. 30	2. 0	3. 35	·1151	3. 0:	·01842			
8. 45	1. 30	4. 19	·1152	11. 16	·02010			
9. 35	2. 25	4. 46	·1158		***			
10. 50	1. 0	5. 7	·1155	19. 58	·02082			
12. 46	1. 55	5. 25	·1158	23. 59	·01970			
13. 20	4. 0		***					
14. 15:	0. 20	9. 36	·1163					
15. 0:	21. 0. 30	9. 47	·1158					
	***		***					
17. 30	20. 55. 0	13. 8	·1163					
	***	13. 45	·1167					
19. 5	52. 0		***					
20. 54	20. 55. 10	15. 16	·1163					
23. 0:	21. 4. 0		***					
23. 59	6. 30	16. 38	·1167					
			***					
		20. 17	·1154					
		22. 8	·1143					
		23. 11	·1147					
		23. 59	·1140					
June 3		June 3		June 3		June 3		
0. 0	21. 6. 35	0. 0	·1140	0. 0	·01970	1. 0	60 ·5	60 ·2
2. 17	6. 35		***	9. 0:	·01812	3. 0	61 ·7	61 ·0
3. 50	2. 30	2. 2	·1149	17. 26	{·02056	9. 0	61 ·2	61 ·5
4. 46	21. 2. 0		***		·02021	21. 0	58 ·2	58 ·4
6. 0	20. 58. 30	3. 42	·1148		***			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 3		June 3		June 3				
h m	° ′ ″	h m		h m		h m	°	°
8. 5	20. 59. 10	4. 28	·1174	21. 0	·02056			
8. 45	21. 1. 0		***		***			
10. 40	20. 59. 30	4. 46	·1179	23. 59	·02013			
12. 15	21. 0. 10	5. 25	·1158					
15. 50	20. 57. 0		***					
16. 38	54. 10	6. 18	·1166					
17. 0	54. 10	6. 46	·1161					
	***	7. 37	·1165					
19. 6	51. 20	8. 16	·1161					
20. 24	59. 30	9. 5	·1166					
21. 30	20. 57. 45		***					
23. 59	21. 4. 30	10. 36	·1153					
		10. 54	·1157					
		11. 55	·1156					
			***					
		14. 29	·1161					
			***					
		17. 8	·1163					
		18. 8	·1160					
			***					
		19. 36	·1143					
			***					
		21. 35	·1150					
			***					
		22. 33	·1152					
		23. 15	·1145					
			***					
		23. 59	·1145					
June 4		June 4		June 4		June 4		
0. 0	21. 4. 30	0. 0	·1145	0. 0	·02013	1. 0	60 ·5	60 ·5
1. 0	5. 10	0. 16	·1148		***	3. 0	61 ·0	61 ·0
2. 15	8. 35		(†)	9. 18	·01980	9. 0	60 ·5	61 ·0
3. 0	9. 0	1. 0	·1151*	11. 39	·02032	20. 0	57 ·4	57 ·3
3. 24	7. 15	1. 35	·1155		***	21. 8	57 ·7	58 ·0
4. 0	7. 30	1. 56	·1161	18. 53	·02071	22. 0	58 ·0	58 ·6
5. 25	21. 3. 10	2. 8	·1176		***	23. 0	59 ·0	59 ·7
7. 10	20. 59. 25		***	23. 59	·01963			
	***	2. 19	·1177					
11. 40	20. 59. 0	2. 40	·1169					
12. 20	21. 1. 0	2. 45	·1177					
13. 45	20. 57. 20	3. 7	·1155					
15. 0	21. 1. 0		***					
16. 35	20. 56. 20	4. 10	·1163					
	***	4. 17	·1158					
17. 54	54. 0	4. 36	·1163					
18. 10	54. 35		***					
18. 40	51. 30	5. 13	·1160					
19. 0	53. 10		***					
19. 35	51. 15	6. 0	·1182					
20. 25:	56. 0	6. 28	·1173					
21. 10	20. 55. 40	6. 50	·1175					
23. 30	21. 3. 10	7. 6	·1165					
23. 59	6. 0	7. 18	·1174					
		7. 35	·1167					
		7. 42	·1171					
		8. 7	·1166					
		8. 39	·1172					
		9. 9	·1169					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		June 4						
h m	° ′ ″	h m		h m		h m	°	°
		9. 17	·1162					
		9. 46	·1168					
			***					
		12. 17	·1173					
		12. 40	·1169					
		13. 17	·1175					
		13. 46	·1167					
		14. 5	·1169					
		14. 34	·1162					
			***					
		17. 8	·1175					
		17. 47	·1175					
			***					
		18. 45	·1168					
		19. 6	·1172					
			***					
		20. 5	·1160					
			***					
		21. 27	·1163					
			***					
		22. 36	·1155					
		23. 59	·1156					
June 5		June 5		June 5		June 5		
0. 0	21. 6. 0	0. 0	·1156	0. 0	·01963	0. 0	59 ·5	59 ·8
0. 40	8. 0	0. 21	·1154	3. 8	·01890	1. 0	60 ·0	60 ·2
1. 30	8. 0	0. 42	·1162	10. 17:	·01573	2. 0	60 ·8	60 ·7
5. 0	21. 1. 20	0. 58	·1157	16. 0	·01802	3. 0	61 ·8	61 ·4
6. 20	20. 59. 35		***	20. 8	·02020	4. 0	62 ·0	62 ·0
7. 35	21. 0. 0	2. 45	·1158		***	6. 0	63 ·3	63 ·7
8. 0	20. 57. 30	3. 7	·1175	21. 55	·01976	9. 0	62 ·8	62 ·8
8. 15	20. 57. 40	3. 42	·1167	23. 59	·01930	12. 0	61 ·9	61 ·6
8. 52	21. 2. 0		***			18. 0	58 ·9	58 ·6
9. 15	20. 59. 0	5. 40	·1177			20. 0	58 ·0	58 ·0
10. 0	21. 0. 35	6. 11	·1172			21. 0	58 ·0	58 ·0
10. 36	20. 58. 0	6. 43	·1177			22. 0	58 ·0	58 ·4
11. 10	21. 0. 0	7. 8	·1169			23. 0	58 ·0	58 ·5
12. 30	20. 57. 5	7. 20	·1171					
	***	7. 49	·1165					
15. 5	59. 0	8. 20	·1170					
16. 16	57. 40		***					
17. 0	54. 50	10. 35	·1166					
17. 30	55. 30		***					
18. 10	53. 0	11. 16	·1172					
	***	11. 27	·1168					
20. 10	57. 20	11. 43	·1174					
21. 0	20. 55. 30		***					
	***	13. 26	·1166					
23. 20	21. 2. 0		***					
23. 59	4. 0	17. 11	·1174					
			***					
		20. 53	·1158					
			***					
		23. 17	·1164					
			(†)					
June 6		June 6		June 6		June 6		
0. 0	21. 4. 5		(†)	0. 0	·01930	0. 0	58 ·0	58 ·5
2. 13	7. 50	1. 0	·1158*	3. 7	·01983	1. 0	58 ·3	58 ·6

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 6		June 6		June 6		June 6		
h m	° ′ ″	h m		h m		h m	°	°
3. 7	21. 5. 30	1. 52	·1158	6. 46	·01983	2. 0	58·8	58·7
3. 35	6. 30		***			3. 0	59·0	58·6
6. 30:	21. 0. 15	2. 35	·1162	12. 7	{·02042	4. 0	58·8	59·0
	***	2. 47	·1158		{·01990	9. 0	58·3	58·8
11. 0	20. 57. 30	5. 5	·1172	18. 17	·02073	21. 0	55·8	56·3
	***	5. 26	·1170		***			
15. 30	59. 0	6. 0	·1175	23. 59	·01976			
15. 55	58. 0	12. 46	·1176					
16. 45	58. 10	14. 27	·1174					
18. 10	55. 0	15. 46	·1175					
	***	18. 34	·1175					
19. 55	20. 54. 0	21. 17	·1167					
23. 59	21. 8. 0	21. 39	·1169					
		21. 53	·1164					
		23. 59	·1166					
June 7		June 7		June 7		June 7		
0. 0	21. 8. 10	0. 0	·1166	0. 0	·01976	1. 0	57·8	58·1
2. 30	10. 5	1. 50	·1176	2. 7	·02000	3. 0	60·3	60·3
5. 45	21. 1. 45	2. 15	·1172	7. 50	·01610	9. 0	62·0	62·0
6. 0	20. 59. 0	2. 36	·1179	15. 15	·01822	21. 0	58·3	58·0
6. 55	57. 55	2. 52	·1173	21. 16:	·02089			
8. 0	59. 30	3. 19	·1176	23. 59	·02030			
9. 8	54. 35	3. 45	·1174					
9. 54	58. 0	4. 9	·1179					
	***	4. 47	·1174					
13. 45	20. 58. 0	5. 46	·1177					
14. 16:	21. 0. 5	6. 11	·1172					
15. 10	20. 56. 15		***					
	***	7. 56	·1175					
17. 30	56. 40	8. 35	·1166					
17. 45	54. 0	9. 11	·1168					
18. 15	54. 30		***					
18. 39	52. 20	10. 10	·1159					
19. 2	54. 30		***					
19. 17	52. 10	11. 4	·1166					
	***		***					
20. 10	53. 0	11. 48	·1157					
21. 0	58. 0	12. 15	·1164					
21. 30	20. 58. 0		***					
23. 59	21. 6. 50	14. 6	·1167					
		15. 3:	·1171					
		15. 46	·1167					
		17. 0	·1178					
			***					
		18. 51	·1171					
			***					
		20. 39	·1150					
		21. 50	·1153					
		22. 19	·1145					
			***					
		23. 36	·1155					
		23. 59	·1151					
June 8		June 8		June 8		June 8		
0 0	21. 6. 50	0. 0	·1151	0. 0	·02030	1. 0	60·8	60·3
0. 45	7. 0	0. 39	·1172		***	3. 0	60·8	60·7
1. 5	8. 10		***	12. 7:	·01811	9. 45	61·3	61·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 8		June 8		June 8		June 8		
h m	° ′ ″	h m		h m		h m	°	°
2. 35:	21. 8. 15	1. 25	·1164	15. 50	·01964	22. 10	55·2	56·1
4. 15	6. 30	1. 50	·1165	21. 7	·02298			
6. 15:	1. 30	2. 35:	·1173	22. 6	{·02231			
7. 30	21. 1. 0	3. 12	·1161		{·02160			
8. 15	20. 57. 0	3. 48	·1164	23. 59	·02169			
10. 50	21. 0. 0	4. 17	·1173					
14. 15	20. 59. 30		***					
15. 10	21. 2. 0	5. 42	·1167					
20. 0:	20. 55. 5	7. 6	·1174					
23. 0	21. 3. 10	7. 37:	·1178					
	(†)	8. 4	·1173					
		8. 35	·1175					
			***					
		10. 6	·1165					
			***					
		10. 47	·1171					
		11. 4	·1185					
		11. 26	·1175					
		11. 50	·1175					
		12. 27	·1170					
		14. 5	·1175					
		14. 46	·1169					
		15. 47	·1179					
		18. 8	·1179					
		20. 55	·1166					
			(†)					
		22. 10	·1160*					
		23. 16	·1153					
		23. 59	·1159					
June 9		June 9		June 9		June 9		
10. 10	20. 56. 17*	0. 0	·1159	0. 0	·02169	10. 10	59·5	60·5
21. 0	55. 45*	0. 49	·1167		***	21. 0	59·0	59·3
		1. 17	·1163	6. 26:	·02183			
		2. 55	·1184	13. 37:	·01950			
		3. 18	·1184	21. 37	{·02110			
			***		{·02047			
		4. 45	·1187	23. 59	·02180			
		5. 0	·1183					
			***					
		6. 12	·1190					
		6. 26:	·1185					
		6. 45	·1190					
			***					
		7. 27	·1177					
		8. 3	·1181					
		10. 45	·1173					
		11. 34	·1181					
		12. 6	·1175					
		13. 8	·1176					
		14. 17	·1168					
			***					
		16. 45	·1173					
		18. 34	·1167					
		22. 10	·1144					
		23. 45	·1142					
		23. 59	·1143					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 10		June 10		June 10		June 10		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	0. 0	·1143	0. 0	·02180	1. 0	60·8	60·3
1. 0	21. 3. 0	1. 7	·1152	0. 20	·02178	3. 0	62·8	62·3
2. 30:	21. 3. 55		***		·01543	9. 0	63·0	63·0
6. 15	20. 57. 0	2. 8	·1175	3. 12	·01520	21. 0	61·6	58·7
10. 0:	54. 45	3. 14	·1177	9. 6:	·01848			
15. 15	56. 35	4. 8	·1171	14. 25	·02002			
	***		***	20. 10	·02330			
18. 25	52. 0	6. 43	·1173	23. 5	·02350			
20. 50	20. 51. 0	7. 26	·1175		·02255			
23. 59	21. 3. 5	10. 18	·1170	23. 59	·02180			
			***					
		13. 7	·1175					
		13. 48	·1174					
			***					
		16. 7	·1183					
			***					
		18. 16	·1184					
		19. 18	·1166					
			***					
		21. 50	·1154					
			***					
		23. 39	·1157					
June 11		June 11		June 11		June 11		
0. 0	21. 3. 10	0. 0	·1157	0. 0	·02180	1. 0	64·7	63·9
	***	0. 45	·1160		***	3. 0	66·5	65·5
2. 0:	7. 20	1. 7	·1156	3. 15	·01821	9. 0	67·3	67·1
	***	1. 11	·1166	4. 7	·01923	20. 0	62·9	61·2
3. 50	3. 30	1. 17	·1161		·02372	21. 0	63·0	62·8
	***		***	7. 38	·02290	22. 0	63·6	63·1
5. 5	3. 30	2. 23	·1162		·02362	23. 0	64·0	63·2
5. 45	21. 2. 0	2. 36	·1157	11. 16	·02348			
6. 44	20. 54. 0	2. 45	·1167		***			
6. 55	54. 10	2. 49	·1161	18. 5	·02770			
7. 10	57. 35	3. 17	·1169	18. 28	·02783			
	***		***		(†)			
9. 14	59. 0	3. 56	·1160					
10. 15	48. 55	4. 8	·1167					
10. 39	50. 35	4. 17	·1158					
10. 54	48. 0	4. 40	·1183					
11. 17	49. 45	4. 48	·1187					
11. 45	44. 10	5. 2	·1183					
13. 13	47. 25	5. 12	·1189					
13. 36	48. 30	5. 35	·1180					
13. 45	52. 5	5. 46	·1191					
14. 4	48. 35	6. 20	·1147					
14. 45	53. 5		***					
15. 45	50. 15	7. 43	·1170					
15. 50	52. 10		***					
16. 10	50. 40	9. 18	·1171					
16. 46	56. 5	9. 44	·1179					
	***	10. 13	·1173					
18. 15	53. 15	10. 37	·1178					
18. 30	51. 10	10. 50	·1172					
18. 46	54. 0	11. 6	·1175					
	***	11. 24	·1162					
20. 41	53. 5		***					
20. 50	51. 0	12. 38	·1154					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 11		June 11				June 12		
h m	° ′ ″	h m		h m		h m	°	°
21. 0	20. 53. 0	13. 36	·1157			0. 0	64·8	63·8
21. 7	51. 10	13. 47	·1169			0. 42	65·3	64·5
21. 20	53. 35	13. 56	·1164				***	
21. 30	50. 45		***			1. 10	·1157	
21. 45	53. 40	15. 13	·1171			1. 19	·1148	
21. 49	20. 51. 30		***			1. 36	·1164	
23. 0	21. 0. 10	16. 46	·1173			1. 47	·1156	
	(†)		***			1. 52	·1170	
		18. 21	·1167			2. 8	·1142	
		18. 37	·1171			2. 34	·1170	
		19. 32	·1158			2. 46	·1153	
			***				***	
		21. 19	·1156			3. 31	·1185	
		21. 43	·1147			3. 49	·1147	
		21. 50	·1160			4. 7	·1146	
		22. 7	·1145			4. 16	·1159	
		22. 16	·1157			4. 32	·1148	
		22. 47	·1140			4. 43	·1175	
		23. 9	·1147			5. 8	·1167	
		23. 20	·1140				***	
		23. 38	·1162			6. 18	·1182	
		23. 59	·1178			6. 42	·1177	
						7. 0	·1190	
						7. 17	·1176	
						7. 36	·1209	
						7. 50	·1175	
						8. 12	·1156	
						8. 35	·1172	
						8. 47	·1154	
						9. 8	·1150	
						9. 29	·1157	
						10. 4	·1151	
						10. 15	·1156	
						10. 26	·1151	
June 12		June 12						
1. 0	21. 9. 45*	0. 0	·1179	1. 0	·02347*			
3. 0	21. 9. 20*	0. 42	·1150	3. 0	·02427*			
9. 0	20. 55. 45*		***	9. 0	·02388*			
21. 0	21. 0. 59*	1. 10	·1157	21. 0	·02665*			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 12. There are no Photographic Traces of the movements of the Declination and Vertical Force magnets on this day.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	June 12 h m		h m		h m	°	°
		10. 44	·1156					
		11. 15	·1143					
		11. 40	·1162					
		12. 2	·1134					
		12. 36	·1171					
		13. 7	·1167					
		13. 18	·1175					
		13. 40	·1156					
		13. 49	·1164					
		14. 7	·1128					
		14. 37	·1176					
		14. 45	·1162					
		14. 55	·1156 ***					
		16. 20	·1169 ***					
		17. 15	·1150					
		17. 20	·1157					
		17. 35	·1149 ***					
		17. 56	·1149 ***					
		19. 2	·1121 ***					
		20. 6	·1131 ***					
		21. 7	·1127 ***					
		23. 26	·1118					
		23. 45	·1127					
		23. 59	·1124					
June 13		June 13		June 13		June 13		
0. 0	21. 2. 30 ***	0. 0	·1124	0. 0	·02166	0. 0	68 ·6	67 ·7
		0. 17	·1134	1. 10	·02010	1. 0	69 ·8	68 ·8
0. 55	8. 0	0. 32	·1123		(†)	2. 0	70 ·9	70 ·3
1. 25	4. 10 ***	0. 46	·1132	2. 16	·02642	3. 0	72 ·0	71 ·6
		1. 12	·1096	3. 13	{·02500 ·02843	9. 0	73 ·2	72 ·6
3. 15	7. 30	1. 37	·1130			21. 0	68 ·8	67 ·4
4. 10	1. 15	1. 45	·1124 ***	3. 56	{·02810 ·02980			
5. 0	21. 4. 0 ***							
		3. 43	·1116	5. 14	{·02900 ·03190 ***			
7. 16	20. 55. 0	4. 8	·1144					
7. 30	58. 0 ***	4. 40	·1144					
		4. 58	·1136	10. 16	·03004 ***			
9. 20	20. 58. 0	5. 21	·1138					
9. 55	21. 1. 35	5. 46	·1131 ***	13. 7	·03086			
10. 11	20. 57. 0			13. 40	·03060 ***			
11. 40	20. 57. 30	6. 10	·1144 ***					
12. 52	21. 5. 0			18. 25	·03556			
13. 16	21. 12. 0	7. 8	·1133		(†)			
14. 10	20. 59. 30	7. 19	·1144	21. 0	·02697*			
14. 50	59. 0	7. 54	·1127	22. 33	·02750			
15. 7	20. 56. 10 ***	8. 17	·1133	23. 59	·02658			
		8. 46	·1122 ***					
17. 5	21. 2. 0 ***	9. 44	·1142					
18. 20	21. 0. 0 (†)	10. 8	·1125					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 13 h m	° ′ ″	June 13 h m		h m		h m	°	°
20. 50	20. 57. 0	10. 17	·1129					
23. 59	21. 5. 0	10. 32	·1122					
		11. 6	·1128					
		11. 39	·1124					
		11. 46	·1129					
		12. 7	·1127					
		13. 15	·1144					
		13. 43	·1132					
		14. 30	·1153					
		14. 46	·1142					
		15. 36	·1133					
		16. 13	·1144					
		16. 35	·1133					
		17. 0	·1132					
		17. 48	·1143 ***					
		19. 0	·1129					
		20. 17	·1119					
		21. 6	·1121					
		21. 40	·1113 (†)					
June 14		June 14		June 14		June 14		
0. 0	21. 5. 0	0. 0	·1120	0. 0	·02658	1. 0	72 ·5	72 ·2
0. 36	5. 5	0. 35	·1117	1. 6	·02590	3. 0	76 ·0	75 ·3
0. 50	6. 50	0. 46	·1119		(†)	9. 0	75 ·8	76 ·0
1. 55	7. 0	1. 37	·1113	3. 55	·03502	21. 0	69 ·6	69 ·7
3. 45	21. 4. 0	1. 58	·1125	4. 46	{·03457 ·03710 ***			
4. 15	20. 59. 50	2. 17	·1125					
6. 10:	21. 2. 10	2. 40	·1131					
7. 22	0. 35	3. 0	·1129 (†)	9. 29	{·03561 ·03620			
7. 46	21. 1. 5							
8. 11	20. 56. 15	3. 50	·1130	11. 13:	·03614			
8. 25	21. 0. 20 ***	4. 29	·1152	14. 21	·03800 ***			
		4. 46	·1156					
9. 30	21. 1. 0	5. 11	·1144 ***	17. 16	·04632			
10. 35	20. 56. 0			23. 59	·03480			
11. 0	58. 30	6. 18	·1124					
12. 5	20. 58. 30 (†)	6. 45	·1130					
		7. 6	·1126					
13. 30	21. 3. 50 ***	7. 30	·1132					
		7. 45	·1127					
15. 0	20. 58. 30 ***	8. 8	·1129 (†)					
16. 40	21. 3. 30	9. 0	·1133*					
17. 30	20. 56. 20	11. 16	·1117					
18. 5	56. 0	12. 45	·1126					
18. 40	53. 35 ***	13. 26	·1118 ***					
22. 25	20. 57. 45	15. 35	·1130					
23. 59	21. 2. 10	16. 7	·1125 ***					
		16. 56	·1133					
		18. 14	·1131					
		19. 7	·1134 ***					
		20. 15	·1122					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	h m		h m		h m	°	°
		June 14						
		20. 39	·1123					
			(†)					
		21. 0	·1118*					
June 15		June 15		June 15		June 15		
0. 0	21. 2. 15		(†)	0. 0	·03480	1. 0	73·0	73·7
1. 30	8. 0	1. 0	·1112*	4. 7	·03002	3. 0	76·3	76·4
3. 16	9. 45	2. 0	·1118	5. 40:	·03237	9. 0	75·5	77·3
4. 0	1. 40	3. 40	·1137		***	21. 7	66·2	68·0
5. 0	5. 30	4. 0	·1113	7. 56	·03305			
	***	4. 45	·1151	8. 36	{·03270			
5. 40	5. 15	5. 11	·1148		{·03362			
6. 10	2. 5	5. 59	·1136	10. 45	·03320			
6. 35	21. 3. 0		(†)	13. 36	·03492			
	***	9. 0	·1127*	14. 35	·03510			
8. 50	20. 59. 0	10. 30	·1143	17. 50	·03922			
9. 9	21. 0. 0	11. 17	·1119	22. 48	{·03058			
9. 30	21. 8. 10	11. 39	·1116		{·02978			
9. 56	20. 52. 15	12. 0	·1123	23. 59	·02907			
10. 45	21. 5. 0	12. 27	·1120					
12. 20	2. 55	13. 28	·1129					
	***	14. 5	·1129					
13. 30	4. 30	14. 18	·1134					
13. 47	21. 10. 50	14. 45	·1129					
15. 0	20. 59. 5	15. 19	·1138					
16. 14	21. 1. 20	15. 45	·1133					
17. 20	0. 0	17. 44	·1137					
18. 0	21. 1. 10	20. 0	·1128					
	***		(†)					
19. 5	20. 58. 30	21. 7	·1123					
19. 30	21. 1. 35							
20. 14	21. 1. 10							
20. 25	20. 59. 25							
20. 45	21. 1. 30							
21. 25	20. 59. 45							
23. 59	21. 7. 0							
June 16		June 16		June 16		June 16		
0. 0	21. 7. 0		(†)	0. 0	·02907	9. 0	73·8	75·0
1. 0	10. 20	4. 0	·1122	1. 10	·02861	21. 15	64·5	66·1
	***	4. 39	·1131	5. 21	·02310			
2. 25:	11. 35	5. 10	·1134	7. 45	·02653			
	***	5. 15	·1130	11. 46	·02790			
3. 45	8. 15	5. 19	·1133	18. 56	·03448			
5. 15	4. 0	5. 43	·1129	23. 59	·02822			
6. 44	4. 5	5. 50	·1137					
7. 45:	1. 0	6. 19	·1130					
8. 46	4. 0	6. 30	·1136					
9. 32	4. 5	7. 0	·1135					
9. 47	7. 10	7. 30	·1129					
10. 15	2. 20	8. 27	·1127					
10. 52	3. 5	8. 57	·1135					
11. 30	0. 45	9. 16	·1130					
13. 14	0. 30	9. 39	·1131					
13. 45	3. 25	9. 57	·1123					
14. 10	2. 35	10. 43	·1132					
14. 55:	4. 20	11. 30	·1126					
16. 30	21. 2. 0	12. 12	·1129					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	h m		h m		h m	°	°
June 16		June 16						
18. 0:	20. 58. 35	12. 39	·1122					
18. 25	20. 59. 10	12. 58	·1124					
	(†)	13. 30	·1121					
20. 40	21. 1. 20	16. 45	·1139					
22. 0	5. 0	19. 39	·1130					
22. 17	9. 0		(†)					
	***	21. 15	·1121*					
23. 10	10. 0							
	(†)							
June 17		June 17		June 17		June 17		
	(†)		(†)	0. 0	·02822	1. 0	67·7	69·3
0. 15	21. 8. 30	1. 0	·1129*	2. 6	·02723	3. 0	70·2	70·8
1. 5	10. 10	1. 33	·1121	4. 20	·02530	9. 0	67·8	69·9
	***	3. 16	·1120	8. 22:	·02273	21. 0	61·6	62·1
3. 25	9. 30	3. 55	·1127	15. 30	·02896			
4. 15	6. 30	4. 29	·1121		***			
	***	5. 14	·1132	23. 59	·02523			
7. 7	2. 20	7. 35	·1131					
	***		***					
8. 30:	3. 15	9. 37	·1136					
	***	9. 57	·1132					
10. 8	1. 45		***					
	***	15. 36	·1143					
12. 45	1. 30	15. 50	·1139					
	***	17. 45	·1149					
14. 30	1. 35	18. 17	·1138					
15. 5	0. 0	18. 45	·1140					
	***		***					
16. 4	21. 3. 15	19. 41	·1135					
	***	20. 27	·1119					
17. 15	20. 58. 40		***					
17. 45	21. 0. 0	21. 39	·1127					
18. 15	20. 58. 30	21. 45	·1120					
	(†)	22. 45	·1121					
21. 15	20. 58. 0	23. 59	·1117					
21. 38	21. 2. 0							
22. 45	3. 0							
23. 59	6. 25							
June 18		June 18		June 18		June 18		
0. 0	21. 6. 25	0. 0	·1117	0. 0	·02523	1. 0	66·5	67·3
1. 40	9. 50	0. 26	·1117	4. 50	·01883	3. 0	69·6	70·3
3. 10	8. 45	1. 9	·1123	6. 47	{·02246	9. 0	70·9	72·0
6. 15:	2. 45	1. 47	·1112		{·02442	20. 0	65·0	66·0
9. 0:	3. 0		***	11. 15	·02566	21. 0	64·7	66·5
10. 0	0. 0	4. 20	·1120	22. 7:	·03203	22. 0	65·3	67·0
	***		(†)	23. 59	·03170	23. 0	66·1	67·3
15. 45	1. 20	9. 0	·1161*					
	***	12. 51	·1159					
17. 15	21. 0. 30		***					
18. 15	20. 56. 35	16. 52	·1170					
	(†)		***					
21. 0	20. 50. 27*	19. 5	·1163					
21. 30	21. 0. 0	19. 18	·1165					
22. 15	20. 59. 0		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 15 and 16. The Horizontal Force traces were faint, and the times are only approximate: their error cannot rise to 10m.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June18		June18						
h m	° ′ ″	h m		h m		h m	°	°
23. 50	21. 5. 20	21. 50	·1146					
			***					
		23. 59	·1151					
June19		June19		June19		June19		
1. 0	20. 59. 24*	0. 0	·1151	0. 0	·03170	0. 0	67 ·0	68 ·3
3. 0	21. 9. 52*	1. 6	·1156	1. 45	·03068	1. 0	68 ·3	70 ·0
		1. 47	·1163	4. 6	·02750	2. 0	70 ·6	72 ·0
		2. 7	·1161		·02927	3. 0	72 ·7	73 ·8
			***	6. 15	·02640	4. 0	73 ·0	75 ·0
		2. 45	·1162	6. 26	·02663	6. 0	75 ·5	76 ·5
		3. 3	·1170		·02860	9. 0	73 ·2	74 ·8
			***	12. 18	·02983	12. 0	71 ·8	73 ·1
		3. 50	·1159	20. 17	·03562	18. 0	67 ·8	70 ·4
		5. 10	·1166		·02740	20. 0	67 ·0	68 ·2
		5. 18	·1161	23. 59	·02810	21. 0	67 ·0	68 ·7
		5. 50	·1174			22. 0	67 ·2	69 ·0
		6. 36	·1175			23. 0	67 ·3	69 ·3
		7. 37	·1157					
			***					
		8. 26	·1168					
		8. 57	·1163					
			***					
		11. 35	·1165					
			***					
		12. 3	·1171					
		13. 7	·1161					
		13. 36	·1164					
		13. 56	·1161					
			***					
		15. 56	·1171					
		17. 0	·1171					
		17. 55	·1168					
		18. 27	·1171					
			***					
		20. 45	·1162					
		21. 16	·1167					
		21. 39	·1158					
		21. 53	·1160					
		22. 17	·1147					
			***					
		23. 59	·1165					
June20		June20		June20		June20		
		1. 0	·1149*	0. 0	·02810	0. 0	67 ·3	69 ·2
		3. 0	·1160*		***	1. 0	68 ·2	69 ·8
		9. 0	·1157*	1. 48	·02819	2. 0	69 ·5	70 ·9
		21. 0	·1150*		***	3. 0	70 ·8	71 ·9
				8. 45	·02316	4. 0	71 ·5	73 ·0
				11. 16	·02352	9. 0	75 ·7	76 ·5
				14. 11	·02430	21. 0	70 ·5	71 ·2
				20. 50	·02911			
				22. 36	·02958			
				23. 59	·02840			
June21		June21		June21		June21		
		1. 0	·1156*	0. 0	·02840	1. 0	72 ·8	74 ·0
		3. 0	·1150*		***	3. 0	73 ·3	74 ·8

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June21		June21		June21	°	°
		h m		h m		h m		
		9. 0	·1175*	4. 42	·02657	9. 0	72 ·7	74 ·0
		21. 13	·1159*		***	21. 13	68 ·2	69 ·0
				7. 51	·02652			
				10. 19	·02610			
				17. 36	·03051			
				17. 45	·02980			
				19. 47	·02729			
				23. 59	·02529			
June22				June22		June22		
	(†)			0. 0	·02529	1. 0		70 ·8
0. 35	21. 3. 40			1. 58	·02521	3. 0	72 ·7	73 ·0
3. 10	5. 5			2. 49	·02480	9. 0	71 ·8	73 ·0
5. 15	21. 0. 30			4. 36	·02302	22. 30	68 ·0	69 ·0
7. 15	20. 58. 0			7. 55	·02240			
7. 50	53. 30			10. 15	·02188			
8. 30	20. 57. 0			14. 20	·02362			
9. 0	21. 0. 5			17. 45	·02570			
	***				***			
10. 32	20. 58. 10			20. 40	·02496			
11. 25	54. 30			22. 27	·02503			
12. 3	59. 0			23. 59	·02458			
12. 25	56. 0							
13. 0:	58. 45							
14. 0:	55. 25							
14. 53	59. 35							
15. 45	56. 40							
16. 35	57. 30							
17. 3	55. 20							
17. 24	56. 15							
17. 35	54. 0							
17. 55	54. 0							
18. 6	52. 35							
18. 54	54. 10							
19. 44	50. 50							
20. 55	56. 55							
21. 18	55. 0							
21. 40	20. 58. 40							
22. 50	21. 1. 15							
23. 59	4. 50							
June23				June23		June23		
0. 0	21. 4. 50			0. 0	·02458	9. 0	70 ·0	71 ·2
	***			3. 10	·02362	21. 0	64 ·0	66 ·6
2. 16	7. 10			7. 5	·02300			
	***			9. 40	·02120			
4. 30	4. 0			11. 30	·02135			
5. 15	0. 40			14. 17	·02271			
5. 45	21. 0. 15			18. 46	·02570			
6. 27	20. 54. 0			19. 37	·02480			
7. 40	58. 10				·02442			
	***			21. 35	·02470			
11. 24	56. 15				·02423			
11. 35	57. 40			23. 59	·02445			
11. 55	56. 0							
12. 10	20. 57. 40							
	***							
15. 20	21. 0. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 19. From this day till June 21d. 21h. the Declination Magnet was resting against some portion of the case enclosing it; it was then liberated, and worked as usual afterwards.
June 20 and 21. The Photographic Traces either failed or were too faint for use.
On June 22 the southern projection of the brass suspension-piece affixed to the top of the vertical support of the Horizontal Force Magnet gave way, and was not restored till July 12.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June23								
h m	° ′ ″	h m		h m		h m	°	°
16. 30	20. 56. 0							
18. 8	56. 0							
	***							
20. 20:	52. 10							
21. 36	55. 0							
21. 44	54. 0							
22. 10	20. 57. 0							
23. 59	21. 2. 5							
June24				June24		June24		
0. 0	21. 2. 5			0. 0	·02445	1. 0	68·6	
3. 10:	5. 30			1. 7	·02402	3. 0	70·4	
4. 0	4. 50				(†)	9. 0	72·2	
4. 50	21. 2. 10			2. 22	·01843	21. 0	65·0	
7. 10	20. 56. 30			4. 45	·01640			
9. 40:	59. 35			8. 16:	·01896			
16. 7	59. 0			11. 41	·01990			
17. 0	55. 0				***			
18. 10	52. 55			18. 46	·02698			
18. 53	53. 30			20. 5	·02565			
19. 50	51. 30				***			
20. 10	56. 15			23. 59	·02530			
21. 10	20. 57. 0							
	(†)							
June25				June25		June25		
	(†)			0. 0	·02530	1. 0	65·7	
0. 28	21. 6. 40				***	3. 0	65·7	
0. 45	8. 30			7. 4	·02628	9. 0	64·0	65·2
1. 24	8. 20			10. 50	·02621	20. 0	62·0	60·3
2. 12	10. 10				·02530	21. 0	60·6	61·4
3. 15	7. 40				***	22. 0	61·7	62·3
3. 39	8. 30			16. 45	·02667	23. 0	62·7	63·4
8. 22	0. 25				***			
8. 44	21. 2. 10			22. 50	·02610			
9. 30	20. 54. 30				·02543			
9. 54	21. 0. 10			23. 59	·02500			
13. 26	1. 30							
13. 44	21. 3. 15							
15. 35	20. 58. 0							
17. 27	58. 20							
19. 13	53. 50							
19. 42	55. 20							
19. 54	20. 53. 0							
20. 52	21. 0. 45							
21. 17	20. 59. 0							
22. 52	21. 4. 30							
23. 8	3. 25							
23. 35	6. 30							
23. 59	6. 0							
June26				June26		June26		
	(†)			0. 0	·02500	0. 0	63·0	62·8
2. 0	21. 14. 45			2. 8	·02432	1. 0	63·7	63·9
3. 0:	14. 25			7. 20	·01992	2. 0	64·8	64·6
5. 0	12. 0				***	3. 0	66·0	65·5
6. 15:	9. 0			14. 49	·02250	4. 0	66·0	66·0
8. 0	8. 30				***	6. 0	67·0	66·9

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June26								
h m	° ′ ″	h m		h m		h m	°	°
10. 30	21. 7. 0							
	(†)							
12. 45	7. 0							
13. 24	9. 35							
13. 36	7. 35							
13. 53	11. 30							
14. 25	5. 0							
16. 40	5. 40							
17. 15	21. 8. 30							
20. 16	20. 59. 0							
20. 35	21. 0. 25							
21. 5	0. 0							
22. 46	3. 40							
23. 30	7. 30							
23. 59	11. 0							
June27				June27		June27		
0. 0	21. 11. 0			0. 0	·02608	0. 0	64·0	65·2
2. 0:	13. 0			4. 43	·02088	1. 0	65·3	66·6
	***			8. 15	·02263	2. 0	66·5	67·8
6. 15	9. 30				·02359	3. 0	67·6	68·8
9. 25	6. 20			13. 30	·02476	4. 0	68·0	68·8
14. 55	9. 0			20. 28:	·02921	9. 0	68·0	68·5
17. 55	4. 30			23. 59	·03003	21. 12	62·2	64·2
18. 10	5. 55							
18. 36	4. 0							
	***							
21. 30	5. 0							
23. 25	14. 0							
	(†)							
June28				June28		June28		
	(†)			0. 0	·03003	1. 0		67·3
0. 40	21. 12. 0			4. 52	·02510	3. 0		69·7
2. 20:	14. 0				·02658	9. 0	70·0	71·6
3. 11	10. 0			5. 17	·02658	21. 15	66·5	67·0
	***				·02821			
4. 50	10. 0			7. 45	·02660			
7. 10	6. 5			12. 46	·02790			
14. 0	5. 55			19. 51	·03220			
14. 35	7. 45			21. 17	·03210			
15. 9	5. 55				·02963			
16. 14	7. 40			23. 59	·02907			
18. 0	21. 0. 30							
19. 25	20. 59. 0							
	***							
21. 55	21. 3. 0							
23. 25	10. 0							
23. 59	10. 0							
June29				June29		June29		
0. 0	21. 10. 0			0. 0	·02907	1. 0	67·5	69·0
4. 0:	7. 40			1. 50	·02843	3. 0	69·0	70·0
6. 0:	4. 35				·03105	9. 0	66·3	68·3
7. 45	3. 55			2. 37	·03081	22. 31	61·0	62·0
8. 10	2. 0				·03362			
10. 8	6. 10			7. 23	·03350			
12. 0	4. 15				·03422			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 23, DECLINATION.—The times may be a little in error, but they are closely approximate: the error will probably not amount to 5m.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 29				June 29				
h m	° ′ ″	h m		h m		h m	°	°
14. 0	21. 4. 40			8. 45	·03390			
17. 5	2. 30			14. 26	·03802			
17. 25	4. 0			21. 29	·02990			
18. 10	4. 0			23. 59	·02893			
18. 41	2. 0							
18. 52	4. 5							
18. 58	2. 25							
21. 15	4. 0							
22. 45	12. 35							
23. 59	12. 0							
June 30				June 30		June 30		
0. 0	21. 12. 5			0. 0	·02893 ***	9. 0	63 ·9	65 ·4
0. 25	14. 40					21. 0	61 ·7	61 ·0
1. 40:	14. 30			3. 43	·02618			
5. 20	7. 0			9. 16:	·02370			
	(†)			14. 45	·02563 ***			
9. 0	5. 0							
10. 30	2. 0			19. 5	{ ·02880			
13. 30	5. 10 ***				{ ·02500			
				22. 30	·02492			
15. 0	9. 0			23. 59	·02410			
15. 55	21. 1. 5							
	(†)							
18. 45	20. 57. 25							
19. 5	59. 30							
19. 16	58. 0							
19. 54	20. 58. 0							
20. 15	21. 1. 30 ***							
21. 45	5. 45							
22. 10	4. 0							
23. 10	9. 30							
23. 59	10. 0							
July 1				July 1		July 1		
0. 0	21. 10. 0			0. 0	·02410	1. 0		65 ·5
	(†)			1. 30	·02196	3. 0		68 ·6
1. 0	14. 8*			2. 43	·02010	9. 0		72 ·3
2. 50	13. 0			4. 0	{ ·02183	21. 0		66 ·8
4. 10:	9. 10				{ ·02720 ***			
7. 15	5. 35							
12. 47	2. 30			8. 17	·02920			
13. 5	4. 0			8. 46	·02870			
16. 25	21. 3. 30 ***			12. 47	·03010			
				20. 16	·03592			
18. 30	20. 58. 35 ***			22. 15	·03372			
				23. 59	·03307			
21. 43	21. 3. 5							
23. 25	9. 15							
23. 59	8. 30							
July 2				July 2		July 2		
0. 0	21. 8. 30			0. 0	·03307	1. 0		68 ·6
1. 30:	10. 0 ***			5. 4	·02728	3. 0		70 ·0
				7. 45	{ ·02760	9. 0		66 ·8
5. 15:	4. 0 ***				{ ·02837	20. 0	63 ·4	63 ·8
				9. 50	·02870	21. 0	63 ·2	63 ·8
10. 55	4. 30			16. 39	·03350	22. 0	64 ·0	64 ·4

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 2				July 2		July 2		
h m	° ′ ″	h m		h m		h m	°	°
11. 15	21. 6. 0			21. 0	{ ·02873	23. 0	64 ·0	64 ·8
11. 50	3. 0 ***				{ ·02663			
				23. 59	·02510			
15. 45:	2. 30							
17. 0	21. 0. 0							
19. 15	20. 58. 0							
23. 59	21. 10. 45							
July 3				July 3		July 3		
0. 0	21. 10. 50			0. 0	·02510	0. 0	64 ·2	65 ·3
1. 45:	12. 10			6. 3	·02043	1. 0	64 ·9	65 ·8
5. 0	6. 5			8. 18	·02138	2. 0	65 ·5	66 ·5
7. 45:	5. 40			11. 26	·02220	3. 0	66 ·6	67 ·5
9. 30	7. 0			18. 12	·02936	4. 0	67 ·0	68 ·0
11. 36	5. 0			19. 46	·02637	6. 0	68 ·5	69 ·4
13. 30	6. 10			21. 17	{ ·02558	9. 0	68 ·0	69 ·0
14. 13	8. 35				{ ·02463	12. 0	65 ·8	67 ·2
17. 10	1. 10 ***			23. 59	·02420	18. 0	61 ·0	64 ·0
						20. 0	62 ·2	62 ·0
19. 5	3. 0					21. 0	62 ·5	63 ·2
19. 15	1. 0					22. 0	63 ·3	63 ·7
19. 32	21. 1. 45					23. 0	64 ·0	64 ·3
19. 50	20. 59. 0							
20. 54	21. 5. 0 ***							
21. 43	4. 0							
23. 10	10. 20							
23. 59	10. 10							
July 4				July 4		July 4		
0. 0	21. 10. 10			0. 0	·02420	0. 0	64 ·7	64 ·8
1. 17	12. 0			3. 46	·02335	1. 0	65 ·2	65 ·3
1. 56	11. 0			7. 18	{ ·02456	2. 0	65 ·4	65 ·4
2. 10	12. 15				{ ·02402	3. 0	65 ·8	65 ·4
2. 52	9. 35			8. 43	{ ·02463	4. 0	65 ·4	65 ·0
3. 13	11. 0				{ ·02427	9. 0	63 ·6	64 ·5
3. 41	9. 0			11. 43	·02476 ***	21. 0	62 ·6	61 ·6
4. 30:	8. 20							
5. 30:	4. 0			15. 17	·02508 ***			
6. 30	7. 0							
7. 50	7. 0			21. 52	·02390			
8. 18	5. 0			23. 59	·02342			
9. 20	7. 30							
11. 0	9. 0							
12. 10	6. 55							
12. 45	11. 0							
13. 35	7. 45							
15. 30	7. 0 ***							
18. 30	1. 30 ***							
20. 50	2. 0							
21. 45	4. 0							
23. 0:	12. 0							
23. 59	2. 40							
July 5				July 5		July 5		
0. 0	21. 2. 45			0. 0	·02342	1. 0		64 ·6
1. 30	3. 0			3. 47	·02196	3. 0		65 ·6
	(†)			9. 50:	·01923	9. 20		66 ·8

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 5				July 5		July 5		
h m	° ′ ″	h m		h m		h m	°	°
3. 0	21. 10. 16*			16. 0	·02263	21. 0		61·7
3. 25	10. 0			18. 45	·02440			
6. 30:	4. 35				(†)			
9. 0	4. 35			21. 17	·02193			
11. 30	6. 25			22. 15	·02228			
12. 0	4. 0			23. 59	·02190			
	***							
14. 15	4. 0							
15. 40	21. 6. 0							
17. 35	20. 59. 30							
	***							
19. 27	20. 57. 30							
21. 45:	21. 1. 45							
23. 59	12. 0							
July 6				July 6		July 6		
0. 0	21. 12. 0			0. 0	·02190	1. 0		64·3
2. 0:	13. 5			5. 26	·01812	3. 0		66·8
4. 50	7. 5			8. 35	·01640	9. 0	67·0	68·0
6. 30:	3. 20			12. 46	·01702	22. 30	66·3	67·5
9. 45:	6. 0			20. 40	·01970			
11. 54	6. 0			23. 59	·01902			
12. 0	8. 0							
12. 30	3. 55							
13. 10	5. 0							
15. 30	21. 3. 25							
18. 50:	20. 58. 30							
22. 50	21. 12. 0							
23. 59	13. 0							
July 7				July 7		July 7		
0. 0	21. 13. 0			0. 0	·01902	9. 0	69·5	70·2
2. 20	12. 30				***	21. 0		65·8
5. 0:	5. 45			5. 7	·01680			
9. 45	4. 35				***			
11. 15	7. 10			14. 6	·01890			
12. 11	4. 40			21. 17:	·02356			
12. 58	11. 0				***			
13. 40	4. 30			23. 59	·02260			
14. 5	6. 55							
14. 45	3. 30							
15. 20	21. 4. 0							
	***							
19. 30	20. 58. 15							
21. 0	21. 3. 30							
22. 5	5. 30							
23. 10:	9. 40							
23. 59	10. 0							
July 8				July 8		July 8		
0. 0	21. 10. 0			0. 0	·02260	1. 0		68·6
2. 30:	9. 30			2. 15	·02123	3. 0		70·7
4. 45	5. 30			4. 40	·01820	9. 0		68·6
	(†)				(†)	21. 8	61·8	63·5
8. 10	4. 20			8. 17	·01831			
8. 45	3. 30			11. 56	·02007			
9. 45:	6. 0			19. 15	·02530			
	***				***			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 8				July 8				
h m	° ′ ″	h m		h m		h m	°	°
15. 5	21. 3. 30			21. 50	·02348			
17. 35	0. 0				·02243			
	***				***			
19. 5	21. 2. 20			23. 59	·02190			
19. 26	20. 59. 0							
19. 50	21. 4. 0							
20. 10	1. 30							
20. 18	4. 55							
20. 42	1. 0							
21. 15	8. 25							
22. 15	4. 25							
23. 59	11. 35							
July 9				July 9		July 9		
0. 0	21. 11. 35			0. 0	·02190	1. 0		66·8
0. 35	15. 40				***	3. 0		68·4
1. 50	16. 10			2. 8	·02063	9. 0		70·9
2. 5	14. 40			5. 26	·01630	20. 9	63·0	64·8
2. 20	16. 0				***	21. 0	63·7	65·0
3. 30	10. 0			8. 10:	·01923	22. 0	64·3	65·2
4. 52	8. 0			10. 13	·01942	23. 0	64·7	65·4
5. 20	10. 0			10. 44	·01903			
5. 51	9. 30			13. 30	·02002			
6. 25	6. 0			23. 17	·02621			
6. 44	7. 0			23. 59	·02604			
7. 22	7. 0							
7. 45	3. 30							
8. 45	21. 3. 25							
9. 16	20. 57. 0							
9. 25	59. 40							
9. 45	20. 59. 0							
10. 1	21. 6. 0							
10. 20	21. 6. 0							
10. 44	20. 58. 15							
11. 5	21. 4. 35							
12. 25	6. 10							
12. 50	4. 0							
13. 35	3. 0							
	***							
14. 35	6. 0							
14. 55	3. 0							
15. 25	5. 0							
	***							
17. 0	1. 40							
	***							
20. 40	3. 30							
20. 47	2. 0							
21. 15	7. 0							
21. 35	6. 0							
22. 10	9. 0							
23. 59	10. 0							
July 10				July 10		July 10		
0. 0	21. 10. 0			0. 0	·02604	0. 0	65·3	66·2
	***			2. 43:	·02523	1. 0	66·3	66·8
1. 50	10. 0				***	2. 0	68·0	68·3
2. 31	11. 0			8. 17	·01950	3. 0	69·0	68·9
4. 10	11. 40				***	4. 0	70·0	69·5
	***							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 10	° ′ ″	h m		July 10		July 10		
h m				h m		h m	°	°
4. 51	21. 11. 0			10. 8	·01892	6. 0	71 ·3	70 ·9
5. 35	7. 5				***	9. 0	69 ·3	70 ·2
6. 5	21. 9. 0			13. 3	·02080	12. 0	64 ·7	68 ·4
7. 10	20. 56. 35			18. 55	·02813	18. 0	61 ·0	61 ·8
8. 0	21. 3. 25			23. 59	·02420	20. 0		61 ·5
8. 35	20. 59. 15					21. 0	62 ·7	61 ·8
9. 0	20. 59. 15					22. 0	65 ·2	63 ·3
9. 10	21. 2. 55					23. 0	66 ·1	63 ·9
9. 27	20. 51. 30							
9. 54	21. 3. 0							
10. 40	20. 53. 30							
11. 0	21. 2. 0							
12. 8	2. 0							
12. 25	21. 7. 10							
13. 30	20. 52. 15							
13. 55	21. 3. 35 ***							
16. 15	1. 0							
16. 40	2. 20							
17. 22	0. 30							
17. 42	5. 30							
17. 55	21. 5. 30 ***							
19. 0	20. 59. 30							
19. 6	21. 3. 45							
19. 36	7. 30							
19. 58	21. 2. 30							
20. 24	20. 58. 30							
20. 29	59. 10							
20. 36	20. 58. 10							
20. 50	21. 1. 35 ***							
21. 33	1. 30 ***							
22. 45	7. 10							
23. 0	7. 0 (†)							
July 11				July 11		July 11		
	(†)			0. 0	·02420	0. 0	67 ·6	65 ·2
0. 5	21. 11. 15			2. 8	·02308	1. 0	68 ·2	66 ·3
1. 12	13. 50			9. 17:	·01702	2. 0	69 ·6	67 ·1
1. 54	11. 0			13. 10	·01938	3. 0	71 ·3	68 ·7
2. 37	12. 10			15. 45	·02210	4. 0		69 ·0
3. 17	15. 15			20. 10	·02523	9. 0		68 ·6
3. 56	14. 5 ***			23. 59	·02418	21. 0		62 ·7
4. 43	9. 45							
5. 8	14. 20							
6. 47	5. 15							
7. 20:	7. 10							
7. 45	5. 30							
8. 25	6. 35							
8. 46	11. 0							
9. 21	5. 10							
9. 35	7. 35							
10. 25	21. 6. 0 (†)							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 11	° ′ ″	h m		h m		h m	°	°
h m								
18. 0	20. 57. 30 ***							
19. 10	21. 6. 0 ***							
19. 50	4. 0							
20. 44	1. 0							
22. 50	7. 15							
23. 59	9. 0							
July 12		July 12		July 12		July 12		
0. 0	21. 9. 0	3. 0	·0944*	0. 0	·02418	1. 0		66 ·2
3. 8	11. 0	9. 0	·0954*	2. 5	·02361	3. 0	70 ·8	68 ·8
5. 45	9. 10	21. 0	·0958*	7. 45	·01650	9. 0	72 ·3	72 ·4
6. 30	6. 30			9. 43:	·01783 ***	21. 0	69 ·0	69 ·8
7. 20	6. 0							
7. 40	1. 0			12. 14	·01796 ***			
8. 0	4. 0							
9. 0	21. 6. 32* (†)			14. 46	·01875			
12. 44	20. 59. 40			19. 7:	·02130			
13. 0	21. 2. 0 (†)			22. 5	·02172			
18. 25	21. 1. 20 ***			23. 59	·02110			
20. 0	20. 58. 40							
20. 50	21. 0. 0							
21. 10	2. 30							
21. 45	2. 0							
23. 40	9. 0 (†)							
July 13		July 13		July 13		July 13		
0. 0	21. 10. 0		(†)	0. 0	·02110	1. 0		70 ·6
0. 55	14. 55	3. 5	·0962*		***	3. 0	72 ·3	72 ·0
1. 15	11. 30	6. 40	·0984	3. 0	·02080	9. 0	70 ·5	71 ·7
2. 15	12. 25	7. 0	·0980	7. 46:	·01865	20. 25	66 ·0	67 ·2
2. 52	10. 40	7. 24	·0987	10. 0	·01870			
3. 16	12. 30	7. 46	·0981	14. 18	·02090			
3. 35	11. 20	8. 21	·0989	23. 59	·02603			
3. 54	12. 30	9. 10	·0979					
4. 50	7. 25	9. 39	·0997					
6. 35:	5. 5	10. 0	·0981					
8. 0:	6. 10	10. 52	·0975					
8. 35	21. 5. 0	13. 41	·0975					
9. 0	20. 58. 0	14. 15	·0983					
9. 32	21. 6. 20	14. 57:	·0975					
10. 0	4. 30 (†)	15. 29	·0984					
15. 0	7. 0	20. 0	·0977					
16. 15	2. 0	20. 40	·0974 (†)					
18. 0	21. 2. 0							
20. 7	20. 59. 35							
22. 20	21. 7. 10							
23. 59	7. 50							
July 14		July 14		July 14		July 14		
0. 0	21. 7. 50	0. 0	·0960	0. 0	·02603	8. 30	70 ·8	71 ·1
1. 15	9. 40	1. 7	·0959	1. 20	·02559	21. 0	66 ·8	66 ·7

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 14		July 14		July 14				
h m	° ′ ″	h m		h m		h m	°	°
3. 18	21. 9. 10	1. 28	·0969	7. 15	·02280			
5. 15	5. 0	3. 28	·0982	9. 19	·02130			
6. 35	21. 5. 0	4. 17	·0971		***			
7. 18	20. 57. 10	5. 15	·0979	13. 45	·02168			
7. 26	57. 40	5. 19	·0973	20. 3	·02550			
	(†)	5. 45	·0994	23. 59	·02605			
8. 30	57. 32*	6. 23	·1005					
10. 36	57. 15	7. 7	·0988					
11. 7	58. 30	7. 29	·1005					
11. 30	54. 20	8. 0	·0989					
11. 47	20. 54. 10	8. 21	·0977					
12. 18	21. 1. 30	8. 44	·0968					
13. 5	20. 59. 30	10. 0	·0974					
13. 27	21. 1. 45	10. 15	·0967					
	(†)	11. 13	·0963					
16. 50	3. 0	11. 30	·0969					
18. 10	1. 20	11. 58	·0966					
18. 28	4. 0	12. 42	·0978					
18. 52	2. 30	13. 11	·0968					
19. 10	3. 30	13. 42	·0981					
20. 5	1. 0	14. 15	·0968					
21. 51	2. 15	15. 27	·0979					
23. 59	9. 30	18. 55	·0978					
			(†)					
		21. 0	·0938*					
July 15		July 15		July 15		July 15		
	(†)	1. 0	·1027*	0. 0	·02605	1. 0	66 ·3	68 ·4
1. 0	21. 10. 30	3. 0	·1023*	3. 7	·02589	3. 0	67 ·8	68 ·8
4. 30:	11. 30	9. 0	·1027*	9. 28:	·02360	9. 0	69 ·0	69 ·7
5. 44	9. 20	21. 0	·1014*	16. 6	·02653	21. 0	64 ·0	65 ·0
6. 45:	4. 30			16. 45	·02742			
11. 0	7. 30			18. 43	·02510			
	(†)				·02458			
15. 15	7. 5			22. 17	·02510			
15. 40:	7. 30			23. 59	·02372			
16. 44	5. 0							
17. 3	6. 45							
17. 40	2. 0							
17. 55	21. 3. 0							
18. 55	20. 59. 0							
20. 25	20. 59. 10							
23. 0	21. 7. 0							
23. 59	9. 5							
July 16		Ju 16		July 16		July 16		
0. 0	21. 9. 5	1. 0	·1027*	0. 0	·02372	1. 0	68 ·0	68 ·8
1. 15	11. 50	3. 0	·1024*	2. 17	·02229	3. 0	71 ·2	71 ·3
2. 10	12. 0	9. 0	·1008*	4. 29	·01980	9. 0	72 ·7	73 ·8
3. 30	11. 0	21. 0	·1005*	8. 50	·01592	20. 0	65 ·5	66 ·0
5. 10	6. 40			10. 35	·01709	21. 0	65 ·3	66 ·0
	***			11. 11	·01672	22. 0	66 ·0	66 ·3
7. 15	6. 0			15. 45	·01920	23. 0	66 ·6	67 ·0
9. 40	5. 0			20. 46	·02380			
10. 25	2. 10			23. 59	·02372			
10. 44	6. 20							

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July 16								
h m	° ′ ″	h m		h m		h m	°	°
11. 30	21. 1. 0							
12. 44	4. 5							
13. 25	2. 0							
19. 7	21. 1. 0							
19. 30	20. 58. 0							
20. 0	21. 1. 50							
20. 31	1. 40							
21. 0	5. 0							
21. 50:	6. 0							
22. 50	9. 5							
23. 59	11. 40							
July 17		July 17		July 17		July 17		
0. 0	21. 11. 40	3. 0	·1051*	0. 0:	·02372	0. 0	67 ·8	67 ·7
0. 40:	12. 0	9. 0	·1057*	3. 47	·02104	1. 0	69 ·3	68 ·8
	***	21. 0	·1044*	9. 5:	·01790	2. 0	70 ·8	70 ·0
2. 25	9. 30			12. 4	·01883	3. 0	71 ·2	70 ·3
2. 35	10. 25			14. 45	·01986	4. 0	71 ·5	71 ·0
4. 25	5. 0			20. 50:	·02450	6. 0	72 ·0	71 ·8
	***			23. 59	·02401	9. 0	71 ·2	71 ·0
9. 25	4. 0					12. 0	69 ·0	69 ·2
9. 58	5. 35					18. 0	65 ·6	65 ·6
10. 22	3. 30					20. 0	65 ·0	65 ·2
10. 50	4. 10					21. 0	65 ·0	65 ·7
11. 10	3. 0					22. 0	65 ·3	66 ·2
12. 25	7. 0					23. 0	65 ·8	66 ·3
13. 15	1. 15							
15. 45:	0. 30							
	(†)							
19. 20	1. 0							
19. 35	2. 0							
20. 0	0. 0							
20. 45	0. 20							
	***							
23. 0	8. 0							
23. 59	9. 0							
July 18		July 18		July 18		July 18		
0. 0	21. 9. 0	1. 0	·1044*	0. 0	·02401	0. 0	66 ·3	66 ·8
2. 32	10. 0	3. 0	·1039*	3. 34	·02250	1. 0	67 ·0	67 ·7
2. 46	7. 35	9. 0	·1061*	5. 40	·02113	2. 0	67 ·6	68 ·3
6. 0:	6. 0	21. 0	·1046*	9. 46:	·02032	3. 0	68 ·0	68 ·6
7. 51	7. 40				***	4. 0	69 ·2	69 ·5
8. 0	6. 0			11. 37	·02065	9. 0	68 ·2	69 ·8
10. 5	21. 5. 0			16. 18	·02302	21. 0	65 ·0	65 ·7
10. 50	20. 57. 50			21. 30	·02630			
12. 45	21. 4. 35			23. 59	·02436			
	(†)							
14. 40	7. 0							
14. 45	2. 20							
15. 30	6. 10							
16. 40:	1. 20							
20. 0	1. 0							
23. 5	12. 40							
23. 30	12. 0							
	(†)							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.
July 15 to 30. There was no Photographic Register of the Horizontal Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 19		July 19		July 19		July 19		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	1. 0	·1057	0. 0	·02436	1. 0	66 ·0	66 ·8
1. 0	21. 10. 56*	3. 0	·1054	6. 5	·02447	3. 0	66 ·8	67 ·3
1. 45	10. 0	9. 0	·1059*	8. 17	·02396	9. 0	68 ·0	68 ·0
5. 14	5. 35	21. 9	·1047	12. 0	·02435	21. 9	66 ·2	67 ·2
5. 44	3. 0			13. 20	{·02483			
8. 45	6. 30				{·02450			
11. 15	5. 10			13. 42	{·02443			
11. 50	7. 50				{·02396			
15. 20	21. 4. 40			15. 50	·02470			
18. 10	20. 58. 20			16. 15	·02447			
20. 45	20. 59. 30			17. 43	·02490			
23. 45	21. 7. 0			18. 27	·02446			
23. 59	8. 35			19. 46	·02463			
				21. 45	·02370			
				23. 59	·02354			
July 20		July 20		July 20		July 20		
0. 0	21. 8. 35	1. 0	·1047*	0. 0	·02354	1. 0	68 ·0	68 ·3
1. 50	11. 0	3. 0	·1057*	2. 15	·02350	3. 0	69 ·8	69 ·8
2. 52	9. 40	9. 0	·1075*	5. 27	·02203	9. 0	71 ·8	72 ·0
3. 44	10. 5	22. 30	·1016	10. 3:	·01910	22. 30	65 ·8	66 ·0
	***			15. 0	·02132			
4. 53	6. 30				(†)			
5. 30	7. 0			22. 17	·02243			
	***			23. 59	·02143			
6. 26	2. 40							
7. 15	4. 50							
	***							
9. 5	4. 10							
9. 25	0. 30							
9. 54	21. 1. 45							
10. 25	20. 58. 0							
11. 13	20. 59. 10							
13. 0	21. 4. 35							
13. 10	5. 50							
13. 30	3. 0							
13. 50	6. 0							
14. 10	5. 0							
14. 50	7. 30							
15. 15	6. 20							
	(†)							
22. 30	8. 6*							
July 21		July 21		July 21		July 21		
	(†)	9. 0	·1056	0. 0	·02143	9. 0	70 ·0	71 ·0
2. 30	21. 14. 0	21. 0	·1036	2. 46	·02042	21. 0	67 ·0	67 ·2
5. 0:	7. 0			10. 15:	·01663			
7. 35	2. 0			12. 26	·01704			
8. 10	2. 0			20. 40:	·02063			
8. 55	4. 35			23. 59	·01980			
10. 30	4. 45							
	(†)							
21. 0	0. 32							
July 22		July 22		July 22		July 22		
1. 0	21. 7. 35*	1. 0	·1040*	0. 0	·01980	1. 0	69 ·3	69 ·5
3. 0	9. 47*	3. 0	·1044*	9. 17	·01672	3. 0	70 ·8	70 ·3

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 22		July 22		July 22		July 22		
h m	° ′ ″	h m		h m		h m	°	°
9. 0	21. 4. 17*	9. 0	·1059*	11. 26	·01684	9. 0	69 ·0	69 ·6
21. 0	3. 43*	21. 0	·1036*	13. 57	·01770	21. 0	66 ·3	66 ·8
				17. 20	·02043			
				20. 10:	·02130			
				23. 59	·02092			
July 23		July 23		July 23		July 23		
0. 0	21. 8. 0	1. 0	·1034*	0. 0	·02092	1. 0	67 ·8	68 ·7
1. 25	12. 10	3. 0	·1053*	1. 37	·01986	3. 0	69 ·1	69 ·5
1. 45	11. 25	9. 0	·1051*	9. 20:	·01510	9. 0	69 ·6	70 ·0
2. 15	13. 0	21. 0	·1042*	14. 0	·01720	20. 0	63 ·0	64 ·0
	***			17. 38	·02030	21. 0	63 ·0	64 ·0
5. 0:	3. 35			20. 45	·02292	22. 0	63 ·0	64 ·3
10. 50	5. 10			23. 59	·02100	23. 0	63 ·3	64 ·7
	(†)							
17. 15	21. 1. 0							
18. 5	20. 58. 35							
19. 16	20. 58. 0							
	***							
20. 55	21. 0. 30							
22. 15	8. 0							
23. 59	14. 0							
July 24		July 24		July 24		July 24		
1. 0	21. 13. 23*	1. 0	·1053*	0. 0	·02100	0. 0	63 ·4	64 ·7
3. 0	10. 42*	3. 0	·1060*	3. 15	·02129	1. 0	63 ·3	64 ·5
9. 0	0. 33*	9. 0	·1058*	5. 50	·02060	2. 0	63 ·9	64 ·9
21. 0	2. 45*	21. 0	·1044	8. 20	·01926	3. 0	64 ·9	65 ·2
				9. 12	·01912	4. 0	65 ·2	65 ·5
				9. 56	·01836	6. 0	66 ·7	67 ·3
				10. 29	·01862	9. 0	66 ·8	67 ·7
				10. 45	·01840	12. 0	67 ·0	68 ·0
				12. 4	·01852	18. 0	66 ·3	67 ·2
				12. 40	·01807	20. 0	66 ·6	67 ·0
				13. 37	·01872	21. 0	67 ·0	67 ·3
				14. 19	·01863	22. 0	67 ·5	67 ·8
					***	23. 0	68 ·0	68 ·5
				16. 3	·01970			
					***			
				16. 56	·01942			
				19. 8	·02040			
				22. 42	·02091			
				23. 59	·02010			
July 25		July 25		July 25		July 25		
1. 0	21. 10. 46*	1. 0	·1022*	0. 0	·02010	0. 0	68 ·3	68 ·8
3. 0	11. 10*	3. 0	·1041*	3. 22	·01908	1. 0	69 ·0	69 ·8
9. 0	6. 4*	9. 0	·1064*	11 15	·01934	2. 0	69 ·3	69 ·4
21. 0	1. 49*	21. 0	·1027*	15. 36	·02005	3. 0	70 ·0	70 ·0
				19. 15	{·02167	4. 0	69 ·8	69 ·7
					{·02130	9. 0	68 ·8	69 ·5
				20. 14	·02123	21. 0	65 ·8	66 ·5
					(†)			
				21. 0	·02074*			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 26	° ′ ″	July 26		July 26		July 26	°	°
h m		h m		h m		h m		
1. 0	21. 11. 15*	1. 0	·1037*		(†)	1. 0	67·6	68·2
3. 0	10. 39*	3. 0	·1061*	0. 26	·01973	3. 0	68·3	69·0
9. 0	1. 55*	9. 0	·1067*	3. 17	·01790	9. 0	67·8	69·2
21. 14	5. 44*	21. 14	·1053*	5. 16	·01778	21. 14	63·6	63·1
				9. 35	·01660			
				12. 12:	·01662			
				17. 18	·02040			
				21. 29	·01829			
					(†)			
July 27		July 27		July 27		July 27		
	(†)	1. 0	·1026*		(†)	1. 0	66·8	67·5
0. 30	21. 11. 20	3. 0	·1044*	1. 0	·01440*	3. 0	69·0	70·3
0. 50	11. 0	9. 0	·1054*	1. 18	·01472	9. 0	68·3	70·2
1. 30:	13. 0	21. 20	·1049*	4. 35	·01008	21. 20	64·0	65·2
4. 0	7. 50			8. 18	·01347			
6. 0	4. 0			14. 6	·01550			
8. 25	21. 3. 5			19. 43	·01886			
8. 50	20. 59. 30				(†)			
9. 55	21. 3. 30			21. 20	·01882*			
	(†)			22. 6	·01887			
21. 20	20. 57. 59*			23. 59	·01762			
July 28		July 28		July 28		July 28		
8. 10	21 5. 1*	8. 10	·1058*	0. 0	·01762	8. 10	69·0	69·5
21. 0	0. 15*	21. 0	·1048*	2. 17	·01580	21. 0	63·9	63·8
				4. 6	·01352			
				7. 56:	·01690			
				12. 36	·01796			
				19. 50	·02502			
				21. 22	·02506			
					(†)			
July 29		July 29		July 29		July 29		
	(†)	1. 0	·1057*		(†)	1. 0	66·8	67·2
1. 0	21. 10. 55	3. 0	·1058*	0. 50	·02407	3. 0	68·8	69·2
1. 30	10. 30	9. 0	·1067*	6. 42	·01829	9. 0	69·5	70·0
3. 45	11. 0	21. 0	·1052*	7. 58	·01730	21. 0	65·2	65·3
4. 30	7. 0				·01763			
6. 20	1. 10			8. 13	·01778			
8. 10	1. 35				·01823			
8. 48	3. 30			9. 18	·01770			
9. 20	2. 40			12. 7	·01812			
11. 0	5. 20			18. 25	·02153			
15. 45	3. 30			20. 4	·02328			
16. 15	7. 35			21. 25	·02342			
16. 30	7. 35			23. 59	·02264			
16. 53	5. 0							
17. 47	6. 35							
19. 55:	1. 0							
21. 50	4. 15							
23. 59	12. 15							
July 30		July 30		July 30		July 30		
0. 0	21. 12. 15	1. 0	·1051*	0. 0	·02264	1. 0	67·4	68·0
	***	3. 0	·1055*	0. 27	·02243	3. 0	69·3	69·7
6. 15	9. 30	9. 0	·1069*		(†)	9. 0	68·4	69·2
	***	21. 0	·1064*	1. 0	·02226*	20. 0	62·0	61·9

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 30	° ′ ″	h m		July 30		July 30	°	°
h m				h m		h m		
8. 30	21. 7. 0			3. 0	·02056*	21. 0	63·0	63·3
10. 45	7. 0			4. 40	·02379	22. 0	64·0	64·2
	(†)			8. 39	·02246	23. 0	65·1	66·0
18. 40	2. 10			12. 20	·02390			
19. 44	0. 0				(†)			
22. 50	6. 0			18. 16	·02728			
23. 59	7. 50			23. 5	·02448			
				23. 59	·02382			
July 31		July 31		July 31		July 31		
0. 0	21. 7. 55	0. 0	·1060*	0. 0	·02382	0. 0	66·0	65·8
2. 0:	10. 55			4. 45	·01763	1. 0	66·8	67·2
4. 55	6. 10	3. 45	·1061*		(†)	2. 0	68·0	68·1
	(†)			6. 56	·01905	3. 0	69·0	69·0
7. 0	4. 0	4. 50	·1073*	11. 0	·01982	4. 0	70·0	69·8
14. 45:	21. 4. 0			16. 45	·02370	6. 0	70·0	69·8
19. 15:	20. 57. 30	7. 5	·1064*	21. 46	·02478	9. 0	69·0	69·2
23. 35	21. 12. 45			23. 17	·02407	12. 0	68·0	68·6
23. 59	12. 25	10. 15	·1070		(†)	18. 0	65·0	66·2
		12. 46	·1073			20. 0	65·0	66·0
		16. 47	·1080			21. 0	65·8	66·2
		18. 16	·1074			22. 0	66·3	66·8
		19. 39	·1057			23. 0	66·9	67·7
		20. 35	·1055					
			(†)					
		21. 0	·1046*					
Aug. 1		Aug. 1		Aug. 1		Aug. 1		
0. 0	21. 12. 25		(†)		(†)	0. 0	67·3	68·6
1. 15	14. 0	1. 0	·1066*	1. 0	·02363	1. 0	68·0	69·6
3. 35	9. 0	2. 33	·1064*	4. 42	·01957	2. 0	69·3	70·0
	***		***	5. 46	·02076	3. 0	70·8	71·5
4. 46	7. 5	3. 38	·1061*		***	4. 0	71·0	72·0
5. 2	5. 10	4. 13	·1074*	7. 50	·02150	9. 0	71·0	72·0
6. 36:	5. 15	4. 35	·1063*	9. 45	·02112	21. 0	65·0	66·3
7. 25	1. 30	5. 8	·1078*	12. 35	·02275			
8. 44	3. 0	5. 43	·1043*	13. 44	·02303			
10. 15	2. 0		***		·02882			
10. 56	21. 6. 15	6. 34	·1063*	21. 13	·02796			
11. 46	20. 57. 25	6. 48	·1059*	23. 59	·02642			
12. 14	20. 57. 30	7. 18	·1057*					
12. 39	21. 2. 35	7. 41	·1076*					
13. 5	21. 4. 0	7. 46	·1057*					
14. 0	20. 56. 0	7. 52	·1067*					
15. 15	21. 0. 0	8. 16	·1057*					
15. 45	20. 59. 40	8. 43	·1060*					
16. 3	21. 2. 0	8. 47	·1056*					
16. 35	20. 59. 10	9. 3	·1064*					
17. 30	20. 58. 0	9. 11	·1058*					
	***	9. 23	·1064*					
18. 28	21. 0. 30	10. 14	·1061*					
	***	10. 40	·1053*					
19. 45:	20. 58. 0	11. 15	·1068*					
23. 15	21. 11. 0		***					
23. 32	15. 0	12. 8	·1051*					
23. 59	17. 10	12. 43	·1050*					
		13. 6	·1066*					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

July 22, 24, 25, 26, and 28. The Photographic Traces of the Declination Magnet were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Aug. 1 h m		h m		h m	°	°
		14. 7	·1055					
		16. 28	·1074 ***					
		18. 35	·1076 ***					
		20. 27	·1047					
		22. 3	·1042					
		22. 36	·1047					
		22. 40	·1041 ***					
		23. 26	·1050					
		23. 40	·1092					
		23. 45	·1074 ***					
		23. 59	·1082					
Aug. 2		Aug. 2		Aug. 2		Aug. 2		
0. 0	21. 17. 10	0. 0	·1082	0. 0	·02642 ***	1. 0	68 ·3	69 ·8
0. 50	17. 0	0. 8	·1090			3. 0	71 ·3	71 ·8
1. 6	21. 45	0. 37	·1051 ***	2. 46	·02430	9. 0	70 ·0	71 ·0
1. 25	19. 30 ***	1. 45	·1062	4. 45:	·02153 ***	21. 0	63 ·0	64 ·5
2. 5	20. 0	2. 29	·1053	9. 26	·02104 ***			
2. 16	17. 0 ***	2. 41	·1064					
		2. 47	·1051	13. 55	·02370			
5. 0	7. 35 ***	3. 6	·1066 ***	18. 46	·02853			
				23. 59	·02570			
5. 45	9. 0	3. 50	·1067					
6. 16	6. 0	4. 7	·1054					
7. 15	8. 10	4. 33	·1063					
7. 28	6. 30	4. 46	·1055					
7. 40	11. 35	5. 15	·1082 ***					
8. 0	1. 30							
8. 10	4. 30	5. 36	·1090					
8. 17	2. 30	6. 7	·1057					
8. 30	6. 0	6. 36	·1066					
9. 14	2. 10	6. 48	·1083 ***					
9. 35	21. 4. 0 ***	7. 17	·1077					
12. 14	20. 51. 0	7. 46	·1052					
12. 40	21. 2. 25	7. 55	·1062					
13. 8	21. 6. 0	8. 6	·1056					
13. 42	20. 56. 35	8. 15	·1065					
14. 0	21. 0. 30 ***	8. 36	·1043 ***					
16. 10	20. 58. 0	9. 52	·1039					
16. 55	21. 1. 0	10. 15	·1049					
17. 9	20. 59. 0	10. 20	·1041					
17. 20	21. 1. 50	10. 33	·1047					
17. 50	20. 56. 40	11. 3	·1033					
18. 0	59. 0	11. 30	·1049 ***					
18. 32	58. 10							
18. 40	56. 20	12. 0	·1038					
19. 15	59. 10	12. 15	·1044					
20. 14	20. 59. 5	12. 41	·1038					
23. 15	21. 9. 0 (†)	13. 0	·1057					
		13. 17	·1053					
		13. 45	·1077					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Aug. 2 h m		h m		h m	°	°
		14. 7	·1055 ***					
		15. 11	·1061 ***					
		16. 30	·1056					
		16. 45	·1061					
		17. 3	·1053 ***					
		17. 49	·1063 ***					
		19. 8	·1042 ***					
		21. 30	·1043					
		22. 16	·1043					
		22. 51	·1055					
		23. 59	·1059					
Aug. 3		Aug. 3		Aug. 3		Aug. 3		
1. 0	21. 10. 46*	0. 0	·1059	0. 0	·02570	1. 0	64 ·2	65 ·2
3. 0	10. 55*	0. 7	·1060	2. 35	·02542	3. 0	65 ·7	66 ·5
9. 0	2. 20*		(†)	7. 10	·02290	9. 0	66 ·2	67 ·8
22. 0	6. 50*	1. 0	·1058*	10. 29	·02232	22. 0	66 ·5	67 ·4
		3. 0	·1066*	20. 10	·02563			
		9. 0	·1065*	23. 59	·02502			
		22. 0	·1044*					
Aug. 4		Aug. 4		Aug. 4		Aug. 4		
0. 0	21. 13. 40	0. 0	·1052 ***	0. 0	·02502	8. 0	72 ·0	73 ·0
1. 51	17. 20			2. 7	·02420	21. 0	65 ·8	65 ·9
2. 16	15. 30	4. 43	·1046	8. 18	·01792			
2. 35	16. 0	6. 21	·1048	13. 45	·01983			
6. 15	2. 0	6. 32	·1043	19. 40	·02490			
7. 41	1. 55	7. 49	·1043	21. 41:	·02567			
9. 15	3. 30	8. 56	·1050	23. 6	·02510			
9. 30	5. 20	9. 5	·1046		(†)			
14. 51	2. 30	9. 21	·1055					
15. 44	4. 0	11. 13	·1058					
17. 7	2. 0 ***	11. 35	·1072					
		11. 42	·1065					
18. 59	4. 30 ***	11. 46	·1067					
		12. 6	·1051					
20. 43	3. 10	12. 22	·1057					
21. 41	6. 55	12. 36	·1051					
21. 51	6. 30	13. 11	·1057					
23. 59	12. 10	13. 38	·1056					
		16. 13	·1065					
		17. 37	·1059					
		18. 21	·1065					
		21. 18	·1048					
		23. 59	·1040					
Aug. 5		Aug. 5		Aug. 5		Aug. 5		
0. 0	21. 12. 10	0. 0	·1039		(†)	1. 0	70 ·3	70 ·5
1. 30:	13. 35	1. 6	·1040	0. 50	·02420	3. 0	72 ·5	73 ·3
5. 30	3. 0	1. 55	·1025 ***	4. 33	·01769	9. 0	73 ·6	74 ·0
8. 30	3. 0 ***	2. 47	·1032	8. 50	{ ·02140 ·02265	21. 0	66 ·2	66 ·8
12. 10	5. 55	3. 46	·1025 ***	13. 6	·02410 ***			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 5		Aug. 5		Aug. 5		h m	°	°
h m	° ′ ″	h m		h m				
13. 10	21. 1. 15	5. 37	·1043	17. 37	·02730			
			***		***			
13. 35	1. 20							
	(†)	7. 26	·1042	20. 46	·03028			
			***	22. 35	·03066			
15. 15	21. 1. 10			23. 59	·02973			
15. 50	20. 58. 0	8. 33	·1043					
16. 30	21. 4. 30	9. 4	·1050					
			***					
16. 54	20. 59. 0							
	***	10. 25	·1041					
			***					
18. 0	20. 59. 0							
	(†)	12. 37	·1054					
20. 50	21. 1. 30	12. 50	·1062					
	***		***					
23. 40	18. 35	14. 2	·1055					
23. 59	17. 35	14. 18	·1070					
		14. 25	·1059					
		14. 36	·1072					
		14. 44	·1054					
		14. 50	·1068					
		15. 15	·1064					
		15. 29	·1075					
			***					
		16. 7	·1064					
			***					
		18. 18	·1076					
		18. 42	·1034					
		18. 49	·1073					
		18. 57	·1054					
			***					
		19. 56	·1053					
			***					
		21. 18	·1042					
			***					
		21. 46	·1031					
			***					
		22. 3	·1044					
			***					
		23. 7	·1034					
		23. 26	·1049					
		23. 37	·1037					
			***					
		23. 59	·1024					
Aug. 6		Aug. 6		Aug. 6		Aug. 6		
0. 0	21. 17. 30	0. 0	·1024	0. 0	·02973	1. 0	68 ·8	69 ·8
0. 45	20. 15	0. 13	·1024	2. 50	·02742	3. 0	71 ·2	71 ·6
1. 30	16. 20		(†)	3. 45	·02605	9. 0	72 ·0	73 ·7
2. 44	12. 25	1. 0	·1036*		·02780	20. 0	64 ·0	64 ·3
2. 57	14. 30	3. 0	·1056*		***	21. 0	64 ·9	64 ·8
3. 30	10. 0	3. 3	·1051	6. 48	·02648	22. 0	65 ·8	66 ·0
3. 45	12. 5	3. 29	·1027		***	23. 0	66 ·7	67 ·0
			***	11. 27	·02770			
4. 6	8. 20			15. 33	·03163			
	***	4. 5	·1016					
6. 40	21. 3. 50	4. 17	·1029		(†)			
7. 5	20. 52. 10	4. 35	·1013	19. 35	·02463			
7. 25	58. 0	4. 43	·1022	23. 59	·02170			
			***					
7. 36	20. 56. 10							
7. 49	21. 0. 0	5. 5	·1018					
8. 6	20. 52. 5	5. 33	·1029					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 6		Aug. 6		h m		h m	°	°
h m	° ′ ″	h m						
8. 24	20. 58. 30	5. 46	·1023					
			***					
8. 31	20. 56. 30							
8. 55	21. 3. 40	6. 45	·1043					
9. 10	0. 20	7. 2	·1032					
9. 45	4. 30	7. 13	·1066					
13. 50	4. 0	7. 34	·1039					
	(†)	7. 43	·1054					
21. 0	2. 49*	8. 0	·1025					
		8. 17	·1056					
		8. 27	·1042					
		8. 46	·1046					
		9. 4	·1021					
		9. 17	·1030					
			***					
		12. 15	·1037					
			***					
		15. 46	·1049					
			(†)					
		21. 0	·1032*					
Aug. 7		Aug. 7		Aug. 7		Aug. 7		
0. 0	21. 13. 10		(†)	0. 0	·02170	0. 0	67 ·8	68 ·3
0. 23	14. 30	0. 17	·1044	4. 18	·01626	1. 0	68 ·8	69 ·2
0. 51	14. 35	0. 50	·1035	7. 30	·01872	2. 0	70 ·0	70 ·3
4. 30	6. 0		***		***	3. 0	71 ·2	71 ·7
	***	2. 36	·1037	13. 6	·02106	4. 0	71 ·7	72 ·2
8. 40	2. 30		***	18. 26	·02660	6. 0	73 ·0	73 ·5
	(†)	3. 25	·1042	22. 35	·02392	9. 0	71 ·8	72 ·8
9. 0	21. 3. 32*	3. 40	·1054		(†)	12. 0	70 ·0	71 ·2
21. 0	20. 59. 32*	4. 33	·1033			18. 0	67 ·0	68 ·0
		4. 45	·1032			20. 0	67 ·0	68 ·2
		5. 11	·1037			21. 0	67 ·2	68 ·3
			***			22. 0	67 ·6	68 ·7
		7. 45	·1038			23. 0	68 ·0	69 ·0
		8. 26	·1044					
		8. 44	·1040					
			***					
		9. 26	·1048					
		9. 43	·1042					
			***					
		10. 46	·1043					
		11. 7	·1070					
		11. 46	·1044					
		12. 15	·1051					
		12. 39	·1052					
		12. 50	·1042					
			***					
		16. 17	·1063					
			***					
		20. 38	·1056					
		21. 17	·1050					
			(†)					
Aug. 8		Aug. 8		Aug. 8		Aug. 8		
	(†)		(†)		(†)	0. 0	68 ·0	69 ·0
1. 0	21. 13. 0	1. 0	·1060*	1. 0	·02273*	1. 0	68 ·1	69 ·1
1. 53	12. 0	3. 0	·1072*	1. 37	·02274	2. 0	68 ·8	69 ·8
2. 14	14. 5	3. 7	·1060	3. 43	·02296	3. 0	69 ·2	70 ·2
	***		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 3. The Photographic Traces of the Declination and Horizontal Force Magnets were too faint for use.

August 4. DECLINATION AND HORIZONTAL FORCE.—The times may be in error to the amount of five minutes.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 8		Aug. 8		Aug. 8		Aug. 8		
h m	° ′ ″	h m		h m		h m	°	°
5. 30	21. 5. 5	6. 46	·1068	8. 15	·02163	4. 0	70 ·0	70 ·8
8. 15	21. 3. 0		***	12. 6	·02144	9. 0	70 ·0	71 ·2
9. 55	20. 59. 0	7. 50	·1067	13. 29	·02176	21. 0	66 ·0	67 ·2
11. 10	21. 1. 0		***	15. 40	·02408			
12. 7	20. 55. 0	8. 40	·1071	17. 36	·02283			
12. 17	56. 10	9. 43	·1066	18. 7	·02330			
12. 50	20. 51. 0	10. 12	·1085		***			
	(†)	10. 35	·1074	21. 0	·02173			
15. 20	21. 3. 0	10. 50	·1078	21. 33	·02177			
16. 10	2. 0	11. 43	·1071	23. 59	·02050			
16. 50	4. 5	12. 10	·1055					
18. 5	0. 0	12. 45	·1076					
	***	13. 2	·1077					
20. 38	0. 10	13. 47	·1051					
23. 40	15. 0		***					
	(†)	15. 58	·1066					
			***					
		17. 13	·1059					
			***					
		19. 5	·1064					
			***					
		21. 17	·1057					
			***					
		22. 45	·1057					
		23. 9	·1043					
			***					
		23. 46	·1047					
		23. 59	·1042					
Aug. 9		Aug. 9		Aug. 9		Aug. 9		
	(†)	0. 0	·1042	0. 0	·02050	1. 0	68 ·0	70 ·2
1. 0	21. 13. 39*	0. 39	·1026	3. 36	·01898	3. 0	70 ·8	71 ·5
1. 15	15. 0	0. 46	·1030		·01540	9. 0	72 ·5	73 ·4
1. 45:	15. 0	1. 27	·1011	9. 17	·01337	21. 10	68 ·2	69 ·4
5. 45	4. 30		(†)	12. 45	·01382			
7. 10	2. 15	1. 48	·1062	16. 26	·01530			
8. 30	5. 0		***	22. 15:	·01792			
12. 45	21. 2. 10	5. 29	·1081	23. 59	·01730			
	(†)	5. 46	·1071					
21. 10	20. 58. 32*	6. 3	·1074					
		6. 18	·1065					
		7. 36	·1068					
			***					
		12. 15	·1064					
		14. 42	·1067					
		15. 30	·1075					
			(†)					
		21. 10	·1037*					
Aug. 10		Aug. 10		Aug. 10		Aug. 10		
	(†)		(†)	0. 0	·01730	1. 0	71 ·3	72 ·4
0. 55	21. 2. 45	0. 40	·1028	3. 36	·01294	3. 0	73 ·0	75 ·3
1. 15	11. 50	1. 5	·1032	7. 7:	·01580	9. 0	75 ·3	75 ·8
2. 0:	12. 10	1. 42	·1016	9. 42	·01642	21. 0	68 ·5	69 ·0
3. 40	6. 45		***	11. 45	·01780			
6. 5	4. 0	3. 26	·1035	19. 56	·02532			
7. 10	3. 10	3. 47	·1031	23. 59	·02231			
7. 55	0. 0		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 10		Aug. 10						
h m	° ′ ″	h m		h m		h m	°	°
8. 44	21. 1. 0	4. 58	·1042					
9. 5	4. 30	5. 14	·1039					
9. 20	2. 30	5. 40	·1049					
	***	6. 39	·1049					
11. 0	5. 0	6. 56	·1038					
	***		***					
11. 45	3. 0	7. 45	·1042					
12. 15	6. 5	8. 7	·1056					
12. 50	3. 50	8. 40	·1043					
15. 10	21. 3. 55	9. 45	·1044					
17. 55	20. 59. 10	10. 28	·1052					
18. 15	21. 1. 35	11. 7	·1043					
18. 52	21. 1. 30		***					
19. 24	20. 58. 5	12. 0	·1056					
20. 10	21. 0. 0		***					
20. 30	3. 30	13. 6	·1049					
21. 0	5. 0		***					
	(†)	15. 45:	·1062					
23. 0	9. 10		***					
23. 59	11. 45	18. 17	·1051					
		18. 56	·1050					
		19. 33	·1041					
			***					
		21. 8	·1043					
			(†)					
Aug. 11		Aug. 11		Aug. 11		Aug. 11		
0. 0	21. 11. 45		(†)	0. 0	·02231	8. 30	74 ·7	76 ·2
2. 32	13. 40	1. 44	·1051	6. 56	·01542	21. 0	71 ·3	71 ·8
3. 43	9. 0	2. 29	·1048	10. 17	·01684			
3. 49	9. 55	4. 18	·1048	14. 15	·01880			
4. 23	7. 45	5. 42	·1039	20. 36	·02243			
0. 45	8. 30	5. 54	·1042	23. 25	·02225			
5. 39	6. 0	6. 24	·1041	23. 59	·02168			
6. 16	0. 30	7. 9	·1030					
7. 19	2. 30	7. 30	·1041					
9. 29	3. 25	12. 32	·1054					
12. 36	0. 15	13. 36	·1049					
13. 17	3. 0	14. 21	·1055					
14. 10	0. 25	15. 0	·1051					
15. 13	21. 0. 50	15. 15	·1053					
15. 26	20. 58. 40	15. 27	·1051					
15. 32	59. 55	18. 16	·1055					
15. 45	57. 10	19. 46	·1041					
16. 0	59. 10	21. 36	·1031					
16. 56	20. 59. 0	22. 17	·1030					
17. 30	21. 3. 20		(†)					
18. 9	21. 4. 25							
18. 40	20. 57. 30							
18. 54	21. 0. 0							
21. 7	2. 20							
	(†)							
Aug. 12		Aug. 12		Aug. 12		Aug. 12		
1. 0	21. 12. 17*	1. 0	·1027	0. 0	·02168	1. 0	76 ·0	76 ·6
3. 0	11. 48	3. 0	·1030	3. 42	·01527	3. 0	79 ·0	79 ·5
9. 0	2. 15*	9. 0	·1047*	7. 50	·02170	9. 0	79 ·8	80 ·1
21. 0	2. 12*	21. 0	·1042	8. 26:	·02132	21. 0	71 ·0	72 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	h m		Aug. 12 h m		h m	°	°
				8. 48	·02163			
				11. 42	·02242			
				13. 50	·02406			
				16. 40	·02683			
				19. 28	·02896			
				23. 15	·03079			
					(†)			
Aug. 13		Aug. 13		Aug. 13		Aug. 13		
	(†)		(†)		(†)	1. 0	71 ·8	73 ·2
1. 0	21. 10. 30	1. 0	·1048*	0. 50	·02942	3. 0	73 ·3	75 ·0
2. 20:	10. 0	1. 23	·1051	8. 13:	·02140	9. 0	73 ·6	75 ·2
4. 53	4. 0		***	13. 55:	·02402	20. 0	66 ·5	68 ·2
5. 10	5. 10	3. 49	·1047	18. 56	·02910	21. 0	66 ·8	67 ·6
6. 30:	2. 30		***	21. 30	·02583	22. 0	67 ·3	68 ·5
11. 0	2. 45	6. 46	·1047	22. 36	·02495	23. 0	67 ·8	69 ·4
17. 15:	21. 3. 0	7. 8	·1050		(†)			
18. 50:	20. 59. 0		***					
20. 25	21. 6. 35	10. 43	·1055					
20. 55	6. 0		***					
22. 30	12. 0	16. 45	·1064					
	(†)		***					
		18. 53:	·1059					
		20. 3	·1042					
		21. 17	·1035					
		22. 15	·1044					
		23. 9	·1045					
			(†)					
Aug. 14		Aug. 14		Aug. 14		Aug. 14		
	(†)		(†)		(†)	0. 0	68 ·3	70 ·2
1. 0	21. 13. 0*	1. 0	·1051*	1. 0	·02422*	1. 0	70 ·2	70 ·8
4. 25	10. 0	3. 0	·1062*	3. 0	·02332*	2. 0	71 ·0	71 ·0
	***	3. 28	·1059	4. 45	·02173	3. 0	72 ·5	72 ·0
5. 30	7. 15	3. 50	·1053	9. 34:	·01930	4. 0	72 ·8	72 ·0
6. 50	7. 0		***	12. 7	·02048	6. 0	73 ·3	73 ·5
	(†)	4. 35	·1058	15. 46	·02260	9. 0	72 ·8	73 ·7
9. 0	4. 44*	4. 44	·1053	16. 26	·02257	12. 0	71 ·0	71 ·6
10. 0	4. 15	5. 6	·1065	18. 25	·02360	18. 0	64 ·5	65 ·5
12. 0	3. 50	5. 9	·1060		(†)	20. 0	69 ·0	69 ·5
12. 54	1. 30	5. 35	·1094	21. 0	·01652*	21. 0	69 ·3	70 ·0
13. 25	5. 0	5. 50	·1051			22. 0	70 ·0	69 ·8
	(†)	6. 7	·1046			23. 0	70 ·8	70 ·3
21. 0	8. 37*		***					
		6. 36	·1055					
		6. 40	·1047					
		7. 15	·1067					
		7. 29	·1062					
			***					
		8. 6	·1068					
			***					
		8. 42	·1061					
			***					
		11. 45	·1066					
		11. 56	·1081					
		12. 5	·1052					
		12. 46	·1079					
		13. 5	·1074					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug. 14 h m		h m		h m	°	°
		13. 46	·1082					
		14. 25	·1077					
			***					
		15. 27	·1086					
		15. 56	·1067					
		16. 40	·1086					
		17. 59	·1079					
		18. 27	·1052					
			***					
		19. 40	·1056					
			***					
		21. 7	·1064					
			***					
		22. 16	·1055					
		23. 35	·1057					
		23. 59	·1053					
Aug. 15		Aug. 15		Aug. 15		Aug. 15		
	(†)	0. 0	·1053		(†)	0. 0	71 ·2	71 ·4
1. 0	21. 14. 26*	0. 36	·1047	1. 0	·01692*	1. 0	71 ·2	71 ·8
1. 15	15. 55	1. 7	·1059	3. 6	·01710	2. 0	71 ·5	72 ·5
1. 30	16. 0		(†)	9. 45:	·01463	3. 0	71 ·8	73 ·2
2. 14	12. 0	3. 0	·1072*	14. 17	·01690	4. 0	72 ·5	73 ·0
3. 0	10. 40	6. 18	·1056	15. 56	·01792	9. 0	72 ·8	74 ·0
3. 16	8. 25	6. 47	·1064	16. 13	·01758	21. 0	66 ·7	68 ·0
5. 45	3. 20		***		***			
7. 15	2. 0	7. 40	·1055	20. 25	·02002			
9. 0	5. 0		***		(†)			
	***	11. 6	·1058	21. 0	·01622*			
10. 45	3. 15	12. 3	·1064					
11. 21	4. 55		***					
11. 50	3. 0	13. 36	·1059					
	(†)							
19. 7	21. 5. 0	14. 37	·1066					
	***	15. 6:	·1059					
20. 6	20. 59. 0	15. 45	·1068					
20. 13	21. 2. 0	16. 37	·1066					
20. 28	0. 25	17. 3	·1070					
20. 38	2. 15	19. 9	·1049					
	***	19. 55	·1047					
21. 44	3. 0	20. 8	·1039					
23. 30	8. 0	20. 35	·1052					
	(†)	21. 17:	·1035					
		21. 48	·1045					
			***					
		22. 40	·1043					
			***					
		23. 45	·1052					
			(†)					
Aug. 16		Aug. 16		Aug. 16		Aug. 16		
	(†)		(†)		(†)	1. 0	66 ·8	69 ·0
0. 30	21. 10. 10	1. 0	·1058*	0. 15	·01640	3. 0	67 ·3	68 ·9
0. 50	11. 5	2. 5	·1061	5. 11	·01803	9. 0	67 ·0	68 ·0
1. 30:	9. 10	2. 21	·1067	9. 40	·01764	21. 0	61 ·8	63 ·3
2. 39	8. 40	2. 46	·1062	12. 3	·01813			
2. 50	7. 0	3. 34	·1078	14. 50	·01830			
	***	3. 45	·1070	15. 40	·01769			
					***			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 11. DECLINATION AND HORIZONTAL FORCE.—The times are approximate only, and may be in error to the amount of 15 minutes.

August 12. Declination and Horizontal Force Photographic Traces were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 16		Aug. 16		Aug. 16				
h m	° ′ ″	h m		h m		h m	°	°
4. 25	21. 4. 10	4. 8	·1081	18. 15	·01750			
4. 40	2. 25	4. 35	·1072	18. 46	·01792			
	***		***	19. 7	·01750			
7. 43	4. 50	5. 34	·1067	19. 18	·01758			
8. 15	6. 0		***					
9. 0	4. 55	7. 36	·1076	20. 16	{·01730 ·01281			
10. 30	21. 5. 0	10. 15	·1072	22. 17:	·01320			
11. 50	20. 59. 10		***	23. 48	·01256			
12. 15	21. 1. 15	11. 47	·1077		(†)			
	(†)	12. 16	·1068					
17. 30	11. 0	12. 35	·1073					
18. 0	4. 55	13. 35	·1069					
18. 45	2. 0	14. 27	·1075					
19. 5	2. 0	14. 56	·1067					
19. 17	1. 0	15. 25	·1081					
19. 35	2. 20	15. 50	·1071					
19. 51	0. 20	17. 7	·1081					
21. 30	8. 0	17. 29	·1076					
	***	17. 52	·1056					
23. 59	14. 20	18. 45	·1077					
		18. 52	·1073					
		19. 43	·1077					
		21. 6	·1064					
		21. 42:	·1047					
		23. 34	·1055					
			(†)					
Aug. 17		Aug. 17		Aug. 17		Aug. 17		
0. 0	21. 14. 25		(†)	1. 0	·01133*	1. 0	66 ·0	66 ·7
1. 12	14. 40	1. 0	·1049*	3. 0	·00905*	3. 0	68 ·3	69 ·4
	***	3. 0	·1053*	9. 0	·00794*	9. 0	68 ·3	69 ·8
5. 45	3. 15	3. 17	·1045	22. 0	·01483*	22. 0	64 ·0	65 ·0
	(†)	4. 16	·1044					
9. 0	1. 41*	4. 37	·1038					
10. 0	4. 0	4. 48	·1043					
12. 30	3. 30		***					
	(†)	5. 46	·1037					
22. 0	9. 24*	7. 20	·1045					
			***					
		9. 7	·1051					
		11. 18	·1049					
		12. 29	·1053					
			(†)					
		22. 0	·1028					
Aug. 18		Aug. 18		Aug. 18		Aug. 18		
8. 0	21. 5. 32*	8. 0	·1042*	8. 0	·01083*	8. 0	70 ·8	71 ·0
21. 0	3. 40*	21. 0	·1021*	21. 0	·01302*	21. 0	66 ·2	67 ·3
Aug. 19		Aug. 19		Aug. 19		Aug. 19		
	(†)		(†)		(†)	1. 0	68 ·8	69 ·9
1. 0	21. 14. 42*	1. 0	·1049*	1. 0	·01253*	3. 0	71 ·2	71 ·1
1. 30	13. 0	3. 0	·1094*	1. 15	·01250	9. 0	69 ·0	70 ·0
1. 54	13. 0	3. 56	·1121	2. 46	·01145	21. 0	61 ·7	63 ·6
2. 4	14. 55	4. 22	·1048		***			
2. 22	12. 0	4. 35	·1089	3. 29	·01338			
2. 26	13. 35	4. 42	·1065		***			
2. 35	12. 0	4. 47	·1107	4. 50	·01470			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 19		Aug. 19		Aug. 19				
h m	° ′ ″	h m		h m		h m	°	°
2. 40	21. 13. 0	5. 0	·1050	5. 6	·01382			
2. 45	11. 10	5. 10	·1066		***			
2. 50	12. 30	5. 17	·1035	6. 15	·01470			
3. 4	5. 45	5. 30	·1039		***			
3. 16	8. 25	5. 39	·1029	7. 17	·01462			
3. 20	7. 0	5. 47	·1037	7. 40	·01390			
3. 25	9. 0	6. 11	·1027		***			
3. 30	7. 10	6. 16	·1036	9. 39	·01427			
3. 39	21. 12. 30	6. 20	·1029	11. 27	·01490			
4. 0	20. 59. 0	6. 36	·1038	13. 15	·01662			
4. 15	21. 12. 10	6. 46	·1010	13. 50	·01683			
4. 35	20. 58. 15	7. 15	·1049	15. 0	·01790			
4. 44	21. 13. 40	7. 37	·1013	19. 12	·02322			
4. 50	20. 57. 0		***	21. 26	·02132			
5. 23	21. 6. 30	8. 15	·1029	23. 59	·02010			
6. 0	20. 56. 0	8. 30	·1026					
6. 12	58. 30		***					
6. 23	58. 0	9. 4	·1034					
6. 30	55. 30		***					
6. 43	56. 0	9. 37	·1029					
7. 5	20. 48. 15		***					
7. 30	21. 1. 30	10. 36	·1042					
7. 41	20. 58. 10	10. 47	·1039					
8. 20	21. 3. 0	11. 12	·1058					
10. 15	5. 0	11. 33	·1042					
10. 30	2. 30	11. 47	·1048					
11. 8	2. 10	12. 13	·1042					
11. 24	7. 30	12. 31	·1050					
11. 46	5. 0	12. 45:	·1046					
12. 2	5. 0	13. 11	·1054					
12. 25	1. 30		***					
13. 0	2. 30	14. 15	·1049					
13. 45	12. 0	14. 46	·1065					
14. 10	7. 35	15. 5	·1057					
14. 45	12. 15	15. 35	·1062					
16. 0	1. 0	16. 6	·1057					
16. 50	7. 30	16. 40	·1064					
17. 10	6. 0	17. 6	·1049					
17. 15	8. 10	17. 22	·1046					
17. 39	8. 30		***					
18. 0	4. 35	18. 37	·1055					
18. 30	3. 30		***					
18. 32	5. 0	19. 42	·1031					
18. 45	3. 30	20. 5	·1037					
19. 15	3. 30		***					
19. 25	6. 0	22. 15	·1031					
19. 43	6. 0		***					
19. 50	4. 30	22. 58	·1041					
20. 16	5. 45		***					
20. 40	4. 0	23. 20	·1033					
21. 45	10. 0		***					
23. 5	13. 35	23. 59	·1036					
	***							
23. 59	12. 40							
Aug. 20		Aug. 20		Aug. 20		Aug. 20		
0. 0	21. 12. 30	0. 0	·1036	0. 0	·02010	1. 0	65 ·8	66 ·8
0. 25	13. 0		***	0. 56	·01953	3. 0	68 ·0	69 ·5
					(†)			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 20 h m	° ′ ″	Aug. 20 h m		Aug. 20 h m		Aug. 20 h m	°	°
1. 0	21. 10. 15	0. 32	·1047	1. 0	·02023*	9. 0	67·5	69·3
	***	0. 53	·1041	3. 0	·01663*	20. 0	60·5	61·7
1. 45	11. 35		(†)	3. 45	·01570	21. 0	61·0	61·8
2. 30	10. 0	1. 0	·1039*	5. 15	·01342	22. 0	61·3	62·6
3. 50	5. 5	3. 0	·1035*	8. 43:	·01257	23. 0	62·0	63·5
6. 50:	0. 0	3. 15	·1034	12. 38	·01410			
7. 40	1. 30	4. 5	·1036	15. 45	·01722			
8. 35	0. 0	4. 15	·1029	20. 5	·02176			
9. 40	21. 0. 30	4. 18	·1036		(†)			
9. 50	20. 58. 10	4. 32	·1030	21. 0	·02053*			
10. 4	21. 0. 5	4. 43	·1040					
10. 25	20. 58. 10	4. 48	·1033					
11. 45	21. 2. 30	5. 7	·1037					
	(†)	5. 16	·1029					
15. 0	5. 15	5. 42	·1041					
15. 55	3. 0	5. 46	·1034					
16. 8	4. 30	6. 18	·1035					
	***	7. 5	·1052					
18. 44	0. 0	7. 21	·1035					
19. 27	2. 0	7. 42	·1041					
20. 26	0. 15	8. 5	·1037					
21. 50	7. 0	9. 35	·1049					
22. 10	7. 20		***					
23. 25	13. 0	12. 16	·1053					
	(†)	12. 35	·1049					
			***					
		14. 56	·1057					
			(†)					
		21. 0	·1034*					
Aug. 21		Aug. 21		Aug. 21		Aug. 21		
	(†)		(†)		(†)	0. 0	62·8	64·7
0. 35	21. 13. 30	1. 0	·1035*	0. 45	·01593	1. 0	63·3	65·2
1. 2	10. 20	1. 30	·1056	3. 16	·01438	2. 0	64·5	66·2
1. 30	11. 20	2. 37	·1051	9. 17:	·01010	3. 0	65·5	66·7
	***	2. 46	·1043	12. 42	·01108	4. 0	65·5	66·5
3. 0	9. 0	2. 50	·1051	15. 15	·01229	6. 0	66·0	67·3
3. 35	6. 35		***	21. 6:	·01650	9. 0	65·5	67·5
4. 50	8. 0	3. 15	·1052	23. 59	·01542	12. 0	64·2	66·5
	***	3. 27	·1038			18. 0	60·7	61·5
7. 5	2. 0	3. 46	·1044			20. 0	61·0	62·0
8. 25	2. 15		***			21. 0	61·5	62·7
8. 40	0. 20	4. 19	·1034			22. 0	62·3	63·8
9. 0	3. 0		***			23. 0	63·0	64·8
9. 35	3. 45	6. 12	·1057					
9. 58	2. 20	6. 36	·1049					
10. 14	5. 0		***					
10. 30	2. 10	7. 5	·1054					
10. 53	9. 0		***					
11. 25	4. 30	8. 2	·1047					
11. 58	3. 30		***					
12. 8	5. 0	9. 15	·1057					
13. 0	4. 30	9. 41	·1051					
13. 16	2. 0	10. 6	·1057					
13. 40	6. 0	10. 20	·1046					
13. 57	2. 0	10. 46	·1067					
14. 26	2. 0	11. 10	·1053					
14. 52	0. 20	11. 45	·1053					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 21 h m	° ′ ″	Aug. 21 h m		h m		h m	°	°
16. 5	21. 5. 10	13. 46	·1072					
17. 8	20. 58. 30	14. 15:	·1064					
17. 30	21. 2. 30	14. 48	·1070					
	***	15. 35	·1059					
19. 2	20. 59. 25	16. 8	·1061					
19. 30	21. 3. 0	18. 45	·1053					
19. 55	1. 0	19. 20	·1051					
22. 16	13. 30	20. 15	·1031					
22. 45	13. 0		***					
23. 35	15. 0	21. 55	·1039					
	(†)	22. 30	·1037					
		23. 7	·1026					
		23. 26	·1029					
		23. 43	·1026					
		23. 59	·1034					
Aug. 22		Aug. 22		Aug. 22		Aug. 22		
	(†)	0. 0	·1034	0. 0	·01542	0. 0	64·8	65·5
0. 30	21. 14. 30		***	2. 45	·01310	1. 0	66·3	66·8
1. 25	14. 30	0. 55	·1024		***	2. 0	67·2	67·8
	***		***	8. 46	·01022	3. 0	68·0	68·8
4. 40	21. 2. 35	3. 27	·1049	14. 35	·01307	4. 0	68·0	68·5
5. 14	20. 54. 10		***	15. 46	·01320	9. 0	68·2	69·0
5. 39	53. 30	4. 0	·1038	20. 7	·01563	21. 0	65·2	66·8
5. 50	57. 0		***	23. 38	·01588			
6. 12	58. 35	4. 33	·1052		(†)			
6. 30	57. 0	5. 17	·1046					
6. 55	59. 0	5. 29	·1052					
7. 30	20. 47. 30		***					
8. 16	21. 1. 0	6. 56	·1031					
9. 0	1. 0		***					
9. 45	5. 0	7. 37	·1048					
11. 15	6. 0		***					
12. 10	21. 3. 5	10. 13	·1061					
	(†)	12. 3	·1066					
15. 15	20. 58. 0	12. 18	·1062					
15. 35	21. 1. 30		***					
16. 9	20. 58. 30	13. 49	·1076					
16. 40	21. 2. 45	14. 10	·1072					
17. 30	1. 10	14. 36	·1079					
17. 40	2. 40		***					
17. 55	21. 0. 30	16. 50	·1086					
	***		***					
19. 8	20. 57. 0	17. 17	·1071					
19. 43	21. 2. 0		***					
20. 25	2. 15	19. 18	·1054					
21. 30	8. 25	19. 46	·1041					
22. 3	8. 35		***					
22. 55	13. 0	22. 5	·1037					
23. 15	13. 0	22. 45	·1049					
23. 30	14. 40	23. 7	·1044					
23. 50	14. 45	23. 59	·1058					
	(†)							
Aug. 23		Aug. 23		Aug. 23		Aug. 23		
	(†)	0. 0	·1058		(†)	1. 0	67·7	68·8
0. 55	21. 15. 0	0. 12	·1055	0. 32	·01637	3. 0	69·8	70·3
2. 20	9. 0	0. 43	·1066	1. 25	·01546	9. 0	69·2	70·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 17. VERTICAL FORCE.—There was no Photographic Trace.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.23		Aug.23		Aug.23		Aug.23		
h m	° ′ ″	h m		h m		h m	°	°
4. 0	21. 4. 10	1. 8	·1059	5. 14	·00842	21. 0	61 ·8	64 ·2
	***	1. 36	·1065	6. 45	·01047			
6. 0	20. 57. 25		(†)	11. 8:	·01163			
7. 15:	21. 1. 30	2. 17	·1041	12. 17	·01250			
8. 45	21. 1. 35	2. 42	·1047		(†)			
9. 45	20. 58. 35		***	14. 43	·01450			
10. 5	21. 0. 30	3. 45	·1043	17. 6	·01773			
	***		***	20. 47	·02045			
13. 10	21. 2. 0	4. 26	·1051	22. 0	·01962			
13. 35	20. 56. 20	5. 12	·1045	23. 59	·01882			
15. 6	21. 3. 30	5. 27	·1049					
15. 48	20. 57. 20	5. 46	·1028					
16. 40:	21. 0. 30		***					
17. 55:	20. 59. 40	6. 47	·1049					
19. 13	21. 7. 0	7. 8	·1044					
19. 30	7. 0	8. 15	·1049					
20. 11	0. 45	9. 13	·1044					
21. 0	1. 0		***					
23. 59	12. 10	9. 48	·1052					
			***					
		11. 36	·1043					
			***					
		13. 45	·1061					
		14. 17	·1079					
			***					
		16. 8	·1060					
			***					
		17. 46	·1074					
		18. 50	·1048					
		19. 37	·1057					
			***					
		22. 19	·1041					
			***					
		23. 59	·1050					
Aug.24		Aug.24		Aug.24		Aug.24		
0. 0	21. 12. 10	0. 0	·1050	0. 0	·01882	1. 0	64 ·2	65 ·5
0. 38	15. 10		***	3. 50	·01670	3. 0	65 ·8	67 ·2
2. 7	13. 30	1. 8	·1049	8. 0	·01502	9. 0	64 ·5	67 ·0
2. 53	7. 0	1. 42	·1030	9. 15	·01523	21. 30	60 ·2	61 ·7
4. 11	7. 55	2. 17	·1044		***			
5. 11	1. 5	2. 56	·1077	11. 13	·01606			
5. 59	3. 20	3. 45	·1047	11. 40	·01600			
6. 24	1. 25	4. 8	·1035	16. 26	·01950			
6. 51	3. 10	4. 20	·1040	21. 45	·01564			
9. 28	5. 30		***	23. 59	·01512			
9. 53	2. 30	5. 46	·1040					
10. 6	3. 15		***					
10. 27	0. 55	6. 15	·1027					
	(†)	6. 40	·1036					
14. 7	0. 50		***					
	***	7. 27	·1039					
15. 58	8. 15	9. 4	·1062					
16. 19	4. 30		***					
17. 9	3. 25	9. 38	·1057					
17. 20	7. 20	10. 6	·1065					
17. 24	6. 0	10. 38	·1031					
17. 30	7. 50	10. 46	·1067					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.24		Aug.24		h m		h m	°	°
h m	° ′ ″	h m						
17. 45	21. 5. 15	11. 5	·1040					
17. 59	5. 55	11. 16	·1047					
18. 19	1. 55	11. 35	·1070					
18. 43	4. 0	11. 55	·1046					
19. 19	3. 20	12. 34	·1060					
19. 40	5. 20		***					
20. 14	2. 35	14. 15	·1066					
20. 57	5. 30	14. 29	·1058					
21. 12	4. 15		***					
22. 7	10. 5	16. 45	·1071					
	(†)	16. 50	·1063					
			***					
		17. 53	·1071					
			***					
		20. 0	·1043					
			***					
		22. 7	·1040					
			***					
		22. 40	·1044					
		22. 46	·1064					
		22. 56	·1042					
		23. 7	·1057					
		23. 16	·1047					
		23. 30	·1056					
		23. 59	·1044					
Aug.25		Aug.25		Aug.25		Aug.25		
	(†)	0. 0	·1044	0. 0	·01512	10. 22	67 ·0	68 ·7
0. 16	21. 13. 20	0. 10	·1055	3. 7	·01380	21. 0	61 ·3	65 ·2
1. 10	16. 10	1. 55	·1070	11. 20:	·00772			
1. 15	14. 15	2. 30	·1055	14. 48	·00961			
1. 37	15. 10	2. 56	·1059	19. 45	·01253			
2. 45	10. 40	3. 13	·1055	23. 59	·01220			
3. 19	6. 10	3. 36	·1059					
5. 13	2. 20	4. 27	·1050					
8. 45	3. 45	5. 13	·1046					
9. 18	2. 10		***					
10. 13	4. 10	8. 42	·1057					
12. 24	4. 30	10. 35	·1053					
15. 14	0. 55	11. 17	·1058					
16. 10	2. 30	12. 46:	·1051					
18. 12	0. 20	13. 58	·1056					
18. 30	21. 2. 0	14. 35	·1053					
19. 37	20. 59. 25	17. 23:	·1070					
23. 36	21. 13. 0	19. 15	·1031					
23. 45	15. 10		(†)					
23. 59	14. 25	21. 0	·1035*					
Aug.26		Aug.26		Aug.26		Aug.26		
0. 0	21. 14. 25		(†)	0. 0	·01220	1. 0	65 ·7	66 ·8
0. 30	13. 0	0. 27	·1041	2. 45	·01103	3. 0	66 ·3	68 ·2
0. 50	14. 40	1. 17	·1051	6. 7	·00863	9. 0	68 ·0	70 ·0
1. 55	13. 0	2. 33	·1047	9. 16:	·00710	21. 0	64 ·3	65 ·5
4. 0:	7. 30		***	12. 35	·00832			
4. 50	2. 35	4. 20	·1061	17. 38	·01150			
5. 45	2. 35		***	21. 56	·01452			
6. 30	4. 0	4. 49	·1057	23. 59	·01328			
8. 55	3. 20		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug.26		Aug.26						
h m	° ′ ″	h m		h m		h m	°	°
10. 0	21. 5. 0	5.46	·1066					
			***					
11.55	5.10							
12.28	3. 0	6.45	·1060					
16.20	4. 0	7. 3	·1065					
			***					
17.55	2. 0							
	***	8.41	·1058					
			***					
19.40	1.30							
23.10	14. 0	10.58	·1060					
	(†)	11.27	·1066					
			***					
		13.13	·1059					
		16.29	·1065					
			***					
		20. 6	·1049					
			***					
		22.40	·1051					
		23.30	·1046					
			(†)					
Aug.27		Aug.27		Aug.27		Aug.27		
	(†)	1. 0	·1040*	0. 0	·01328	1. 0	68·3	70·5
0.15	21. 13.30	3. 0	·1046*	2.37	·00950	3. 0	71·5	73·0
1.35:	13. 0	9. 0	·1052*	5.18	·00543	9. 0	72·8	74·0
4.10	4. 0	21. 0	·1039*	8. 0:	·00786	20. 0	65·6	67·0
7.30:	1.30			13.46	·01050	21. 0	66·3	67·2
9. 7	3. 0			18.30	·01512	22. 0	67·5	68·3
9.35	1. 0			21. 6	·01785	23. 0	68·4	69·2
9.58	2.20			21.45	·01780			
11.30	3.25			23.59	·01622			
12.30	2.30							
15.30	3.55							
19.30:	0. 5							
22.45	13.10							
23.59	13.15							
Aug.28		Aug.28		Aug.28		Aug.28		
0. 0	21. 13.15	0. 0	·1049	0. 0	·01622	0. 0	69·5	70·2
0.46	13. 0	0.37	·1050	4.35	·01050	1. 0	70·7	71·2
4. 8	2. 0		***	7.30	·00748	2. 0	72·0	72·9
	***	2. 6	·1037	9.21:	·00890	3. 0	73·0	73·9
7.25	2. 0	2.35	·1042	11.30	·00921	4. 0	74·3	74·2
9.50	2.10		***	13.17	·01020	6. 0	75·3	75·2
10.20	6. 0	3.29	·1032	20.16	·01683	9. 0	74·0	75·0
11. 0	1. 0		***	23.59	·01725	12. 0	71·0	71·8
13.30:	21. 2.10	5.46	·1035			18. 0	66·2	67·1
14.58	20. 58. 0	6.45	·1043			20. 0	67·0	68·0
15.30	59.20	9. 8	·1045			21. 0	66·5	67·2
16.15	57. 0	10. 7	·1048			22. 0	67·0	68·2
	***	10.45	·1063			23. 0	67·5	69·0
18.40	20. 57.30	11.20	·1052					
19.30	21. 0.20	11.46	·1056					
21.40	2.35	12.17	·1052					
22.45	7.15	15. 2	·1065					
	(†)	15.46	·1065					
		16.50	·1074					
		18.40	·1067					
		18.48	·1060					
		21. 7	·1045					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug.28 h m		h m		h m	°	°
		21.43	·1046					
		22. 4	·1051					
		22.16	·1047					
			(†)					
Aug.29		Aug.29		Aug.29		Aug.29		
	(†)		(†)	0. 0	·01725	0. 0	67·8	70·0
0.15	21. 11.30	0.56	·1053	2.51:	·01562	1. 0	68·0	70·0
1.15:	12. 5		***	6.18	·01208	2. 0	69·1	71·0
3.55	6. 0	6. 2	·1051	7.15	·01162	3. 0	70·0	71·8
5.30	3.30	7.20	·1060	9.43	·01150	4. 0	70·7	72·0
7. 0	3.30	9.41	·1065	12.45	·01296	9.20	71·1	72·5
	(†)		***	17.50	·01872	21. 0	64·0	65·8
9.20	21. 4.27*	11.43	·1061	20. 7	·01613			
21. 0	20. 59. 33*	13.33	·1064		(†)			
		14.20	·1062	21. 0	·01509*			
		17. 7	·1066					
		17.25	·1064					
		18.46	·1065					
			(†)					
		21. 0	·1052*					
Aug.30		Aug.30		Aug.30		Aug.30		
	(†)	1. 0	·1042*		(†)	1. 0	66·8	68·3
0.42	21. 14.10	3. 0	·1050*	0.36	·01312	3. 0	68·0	70·4
1.30	11. 0	9. 0	·1062*	4.45	·00820	9. 0	69·3	70·7
4.30:	3.30	21. 0	·1052*	9. 6:	·00603	21. 0	61·5	63·0
6.47	0.10			13. 7	·00850			
8.44	3.55			19.16	·01482			
	***				·01443			
12.20	3.25			23.35	·01080			
15.25	3. 0				(†)			
19.45:	0.50							
23. 0	2.20							
	(†)							
Aug.31		Aug.31		Aug.31		Aug.31		
0. 0	21. 11.30		(†)		(†)	1. 0	65·5	67·0
0.35:	11.30	1. 0	·1049*	0. 7	·01152	3. 0	68·2	70·3
4. 0	4.10	1. 7	·1048	2.16	·00920	9. 0	71·2	71·8
5.46	2.30	1.36	·1055	5.45	·00286	22.10	62·5	64·0
11.15:	5.30	2. 6	·1047	8.20	·00470			
12.35	4. 0		***	10.11	·00532			
17.22	2.30	3.29	·1047	14.36	·00905			
20.25	0.40		***	19.18	·01504			
22. 0:	9. 0	6. 4	·1053	21.45	·01223			
23. 0	11.20		***	23.59	·01110			
23.59	13. 0	7.15	·1063					
			***					
		8.34	·1062					
		8.43	·1066					
			***					
		9.18	·1054					
		10. 3	·1062					
			***					
		11.37	·1061					
		11.46	·1066					
		12.27	·1062					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 30. The Photographic Trace of the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug. 31 h m		h m		h m	°	°
		15. 53	·1064					
		19. 52	·1061					
		20. 7	·1065					
		22. 35	·1051					
		23. 59	·1051					
Sept. 1		Sept. 1		Sept. 1		Sept. 1		
0. 0	21. 12. 40	0. 0	·1051	0. 0	·01110	8. 0	73·5	74·0
1. 7	12. 0		***	2. 2	·00921	21. 0	65·8	67·0
3. 46	3. 5	1. 46	·1039	5. 21	·00163			
5. 57	1. 50	2. 56	·1038	8. 40	·00508			
7. 14	4. 30		***	11. 7	·00613			
	(†)	3. 34	·1033	14. 35	·00790			
21. 0	4. 2*		***	21. 10	·01382			
		5. 5	·1037		(†)			
		5. 40	·1041					
		5. 49	·1060					
		6. 11	·1053					
		6. 40	·1057					
		6. 59	·1048					
		8. 2	·1059					
			(†)					
		9. 12	·1056					
		9. 40	·1033					
		10. 6	·1045					
		11. 17	·1041					
			(†)					
		14. 28	·1047					
		15. 13	·1059					
		16. 47	·1068					
		18. 30	·1049					
		19. 35	·1046					
		20. 7	·1049					
			(†)					
		21. 0	·1047*					
Sept. 2		Sept. 2		Sept. 2		Sept. 2		
	(†)		(†)	0. 0	·01432	1. 0	68·2	70·3
0. 10	21. 12. 20	0. 30	·1049	1. 6	·01342	3. 0	71·2	72·0
0. 41	12. 0	0. 50	·1054	2. 18	·01114	9. 0	72·0	73·2
1. 5	13. 30	1. 21	·1040	4. 15	·00720	21. 0	66·0	67·4
1. 42	12. 20	2. 22	·1039		***			
1. 58	13. 10	2. 43	·1048	5. 26	·00593			
3. 33	7. 0	3. 12	·1033		***			
4. 26	1. 35	3. 30	·1040	8. 6	·00759			
6. 44	2. 40	4. 12	·1044	9. 0	·00743			
8. 16	1. 15	5. 32	·1049	13. 6	·01032			
8. 43	2. 15	6. 8	·1041	13. 50	·01050			
8. 55	0. 30	7. 4	·1048	15. 46	·01252			
9. 32	2. 30	7. 44	·1044	17. 45	·01391			
9. 49	1. 25	8. 40	·1050	20. 36	·01670			
11. 20	1. 45	8. 55	·1044	20. 48	·01603			
11. 45	0. 30	9. 3	·1049	21. 35	·01550			
12. 48	0. 35	9. 22	·1043		(†)			
13. 6	21. 8. 55	9. 38	·1057					
14. 13	20. 56. 45	10. 0	·1046					
15. 0	58. 50	11. 45	·1057					
15. 12	57. 5	12. 54	·1048					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 2		Sept. 2		h m		h m	°	°
h m	° ′ ″	h m						
15. 27	20. 58. 30	13. 44	·1077					
15. 58	57. 30	14. 13	·1053					
16. 57	20. 59. 50	16. 13	·1061					
17. 27	21. 1. 45	16. 41	·1056					
18. 7	20. 58. 20	17. 40	·1065					
18. 29	21. 2. 0	19. 4	·1062					
18. 40	20. 59. 45	19. 52	·1047					
18. 44	21. 1. 50	20. 29	·1045					
	***		(†)					
20. 0	20. 59. 45	21. 0	·1045*					
20. 15	21. 0. 40							
	(†)							
21. 0	0. 8*							
Sept. 3		Sept. 3		Sept. 3		Sept. 3		
1. 0	21. 10. 44*		(†)		(†)	1. 0	67·5	67·8
3. 0	9. 39*	1. 0	·1063*	1. 0	·01298*	3. 0	68·3	68·8
9. 0	2. 26*	3. 0	·1087*	2. 45	·01309	9. 0	68·0	70·5
21. 0	1. 59*	3. 45	·1044	4. 17:	·01342	20. 0	61·9	63·4
		4. 15	·1048	5. 28	·01250	21. 0	62·0	63·7
		6. 10	·1038	7. 0	·01032	22. 0	62·7	63·8
		6. 26	·1042	8. 17	·00950	23. 0	62·8	63·8
		7. 15	·1036	9. 29	·00934			
		10. 22	·1059	14. 7	·01408			
		10. 52	·1047		·01340			
		12. 33	·1062		***			
		12. 51	·1059	19. 33	·01082			
		15. 40	·1075		(†)			
		18. 37	·1068	21. 0	·00868*			
		21. 43	·1051					
		22. 13	·1043					
		23. 59	·1047					
Sept. 4		Sept. 4		Sept. 4		Sept. 4		
	(†)		(†)		(†)	0. 0	63·0	64·1
1. 0	21. 10. 2*	1. 0	·1062*	1. 0	·01283*	1. 0	63·1	64·1
3. 0	7. 1*	3. 0	·1080*	3. 0	·01303*	2. 0	63·9	64·5
4. 39	3. 0	4. 39	·1071	4. 39	·00802	3. 0	64·5	64·8
6. 18	3. 0	4. 55	·1077	6. 48	·00779	4. 0	65·0	64·9
6. 49	1. 10	5. 51	·1075	13. 15:	·00603	6. 0	66·2	66·8
7. 19	3. 39	6. 17	·1084	21. 18	·00850	9. 15	66·9	67·8
7. 59	1. 10	6. 55	·1076	22. 5	·00850	12. 0	66·5	67·7
8. 41	21. 1. 40	7. 35	·1083		(†)	18. 0	65·0	66·2
8. 58	20. 59. 20	7. 52	·1077			20. 0	65·0	66·4
9. 5	21. 0. 50	8. 4	·1079			21. 20	66·0	67·0
10. 13	2. 10	8. 43	·1065			22. 0	66·6	68·0
10. 40	0. 50	9. 7	·1071			23. 0	67·0	68·8
11. 25	4. 45	10. 2	·1071					
12. 7	2. 0	10. 25	·1063					
12. 26	5. 40	11. 14	·1073					
13. 20	2. 30	11. 58	·1066					
13. 39	21. 2. 50	13. 10	·1080					
	(†)	13. 39	·1071					
15. 0	20. 56. 0	14. 37	·1066					
15. 21	56. 40	15. 0	·1073					
15. 39	59. 20	15. 52	·1064					
17. 0	20. 58. 40	16. 55	·1068					
17. 40	21. 1. 30	18. 13	·1058					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 4		Sept. 4						
h m	° ′ ″	h m		h m		h m	°	°
19. 13	20. 57. 0	18. 45	·1061					
20. 37	20. 59. 30	19. 47	·1056					
22. 25	21. 10. 0	22. 24	·1027					
23. 12	10. 10	23. 45	·1043					
	(†)		(†)					
Sept. 5		Sept. 5		Sept. 5		Sept. 5		
0. 0	21. 9. 40		(†)		(†)	0. 0	67·5	69·8
0. 15	9. 40	0. 45	·1043	0. 16	·00421	1. 0	68·8	70·4
0. 30	13. 15		***	2. 12	·00230	2. 0	70·0	71·5
0. 46	10. 30	2. 6	·1048	5. 45	·00619	3. 0	71·3	72·6
1. 32	12. 0	2. 42	·1038	7. 48	·00743	4. 0	72·2	73·6
2. 5	9. 0	3. 37	·1059	9. 6	·00762	9. 0	73·0	74·5
2. 55	9. 10	4. 10	·1046	9. 35	·00730	21. 0	68·3	70·1
3. 30	6. 30		***	12. 7	·00872			
4. 20	6. 35	5. 12	·1047	15. 13	·01170			
6. 0	2. 20		***	20. 45	·01432			
6. 13	1. 0	6. 15	·1054	23. 59	·01473			
6. 28	21. 1. 30	6. 45	·1041					
7. 2	20. 58. 0	6. 50	·1049					
7. 10	21. 0. 0	7. 8	·1049					
	***	7. 18	·1043					
8. 43	20. 52. 10	7. 46	·1057					
9. 15	55. 50	8. 5	·1054					
9. 43	20. 54. 0		***					
	***	8. 47	·1059					
11. 40	21. 0. 35	9. 10	·1056					
13. 35	21. 3. 20	9. 28	·1076					
14. 20	20. 59. 30	9. 45	·1061					
14. 46	21. 3. 0	9. 56	·1065					
15. 0	3. 0	10. 32	·1055					
15. 23	5. 40	10. 47	·1058					
15. 51	2. 0	11. 13	·1051					
16. 45	2. 5	11. 36	·1065					
17. 0	1. 30	11. 46	·1055					
	***	12. 7	·1070					
17. 30	4. 10		***					
	***	12. 45	·1061					
17. 55	4. 50	12. 49	·1066					
18. 25	1. 10		***					
18. 35	3. 0	13. 43	·1056					
18. 50	3. 0		***					
19. 6	1. 30	15. 47	·1060					
19. 30	5. 45		***					
19. 50	4. 30	17. 30	·1049					
	***	17. 46	·1033					
23. 0	10. 0	17. 58	·1035					
	(†)	18. 9	·1031					
		18. 34	·1046					
		18. 50	·1030					
		19. 15	·1045					
			***					
		20. 6	·1048					
			***					
		20. 45	·1043					
		21. 4	·1063					
		21. 29	·1039					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Sept. 5						
h m	° ′ ″	h m		h m		h m	°	°
		22. 15	·1047					
		22. 40	·1031					
		23. 5	·1052					
		23. 12	·1047					
		23. 37	·1058					
		23. 59	·1048					
Sept. 6		Sept. 6		Sept. 6		Sept. 6		
	(†)	0. 0	·1048	0. 0	·01473	1. 0	70·3	71·4
1. 0	21. 10. 0	0. 29	·1033	2. 17	·01452	3. 0	70·8	71·5
1. 50	12. 30		***	8. 50	·01567	9. 0	67·0	68·8
2. 8	10. 20	1. 32	·1046	11. 16	·01768	21. 0	60·0	61·2
	***		***	15. 8	·01420			
6. 40:	2. 0	4. 15	·1063		·01251			
7. 30	3. 0	4. 26	·1060	19. 20	·01547			
	***	4. 47	·1065	20. 37	·01456			
10. 6	21. 4. 5	5. 19	·1058	21. 40	·01510			
10. 44	20. 58. 30	5. 46	·1070	23. 59	·01368			
10. 55	21. 1. 0		***					
	***	6. 35	·1054					
13. 40	2. 10	7. 37	·1066					
	(†)	8. 5	·1061					
15. 25	6. 20	8. 36	·1065					
16. 20	1. 30	9. 27	·1058					
16. 53	21. 2. 0	10. 6	·1065					
17. 40	20. 59. 30	10. 37	·1061					
18. 35	21. 1. 0	10. 55	·1074					
	***		***					
20. 5	20. 57. 0	12. 47	·1066					
23. 8	21. 11. 0		***					
23. 59	11. 50	14. 36	·1076					
		15. 0	·1072					
			***					
		15. 47	·1082					
		16. 36	·1075					
		17. 13	·1077					
			***					
		19. 46	·1065					
			***					
		21. 47	·1042					
			***					
		22. 16	·1047					
			***					
		22. 58	·1040					
			***					
		23. 59	·1044					
Sept. 7		Sept. 7		Sept. 7		Sept. 7		
0. 0	21. 11. 50	0. 0	·1044	0. 0	·01368	1. 0	62·5	64·8
0. 22	13. 45		***	4. 0	·01032	3. 0	64·7	65·8
0. 30	12. 0	1. 30	·1049	9. 36:	·00770	9. 0	65·3	67·2
2. 0:	10. 0		***	14. 29	·01002	22. 34	59·5	60·8
3. 45	4. 5	3. 0	·1063	20. 45	·01496			
3. 53	5. 0		***		·01450			
5. 0:	2. 30	4. 7	·1056	23. 46	·01328			
6. 10	2. 30	4. 20	·1063		(†)			
6. 55	0. 35		***					
7. 43	21. 1. 30	5. 17	·1055					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 1 to 4. The times both of the Declination and Horizontal Force may be in error to 5 or 10 minutes. The Photographic Trace of the Declination Magnet, on the 3rd, is too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 7		Sept. 7						
h m	° ′ ″	h m		h m		h m	°	°
8. 0	20. 59. 0	6. 20	·1059					
8. 15	21. 0. 0	6. 46	·1067					
8. 39	20. 57. 0	7. 47:	·1060					
9. 10	20. 58. 10	8. 23	·1079					
10. 10	21. 1. 30		***					
15. 0	2. 25	8. 48	·1070					
15. 40:	1. 0	9. 2	·1077					
	***	9. 46	·1062					
16. 28	3. 5		***					
17. 8	2. 10	11. 41	·1061					
17. 43	0. 0		***					
18. 10	21. 0. 30	12. 49	·1073					
19. 30:	20. 58. 25		***					
22. 40	21. 13. 30	13. 45	·1069					
23. 45	13. 40		***					
23. 59	12. 10	17. 56	·1078					
			***					
		22. 16	·1054					
			***					
		23. 59	·1054					
Sept. 8		Sept. 8		Sept. 8		Sept. 8		
0. 0	21. 12. 10	0. 0	·1054		(†)	8. 37	65 ·5	66 ·2
0. 30	15. 0	0. 20	·1062	1. 18	·01002	21. 0	62 ·3	63 ·0
1. 30	17. 0	0. 48	·1054	6. 6	·00730			
2. 13	13. 0		***	9. 18	·00580			
2. 30	13. 25	1. 57	·1060	9. 46	·00580			
2. 50	11. 10	2. 6	·1054		(†)			
3. 0	12. 35	2. 33	·1062	18. 32	·00970			
3. 39	7. 0	2. 45	·1059	20. 15	·01062			
4. 0	8. 0	3. 5	·1071	23. 59	·00978			
	***	3. 32	·1053					
6. 14	21. 6. 10	4. 17	·1078					
7. 35	20. 45. 50	4. 46	·1068					
9. 27	21. 1. 0		***					
10. 25	0. 0	5. 26	·1081					
11. 5	21. 1. 5	5. 45	·1070					
	(†)		***					
19. 40	20. 58. 10	6. 13	·1077					
22. 30	21. 8. 50	6. 40	·1058					
23. 45	10. 15	6. 46	·1064					
	(†)	6. 55	·1054					
		7. 17	·1069					
		7. 46	·1060					
		8. 0	·1061					
		8. 16	·1055					
		8. 29	·1060					
		8. 45	·1053					
			***					
		9. 28	·1059					
			(†)					
		21. 0	·1041*					
Sept. 9		Sept. 9		Sept. 9		Sept. 9		
	(†)		(†)	0. 0	·00978	1. 0	65 ·2	66 ·3
0. 16	21. 10. 20	1. 0	·1046*	1. 6	·00930	3. 0	66 ·2	68 ·3
1. 42	11. 20	2. 46	·1045	3. 43	·00475	9. 0	66 ·8	68 ·6
3. 43	4. 30	3. 7	·1050	5. 49	·00688	21. 0	61 ·5	63 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 9		Sept. 9		Sept. 9				
h m	° ′ ″	h m		h m		h m	°	°
4. 39	21. 2. 40	4. 18	·1046	7. 56	·00780			
6. 56	21. 2. 10	4. 42	·1051	12. 30	·00892			
7. 35	20. 59. 30		***	15. 18	·01060			
8. 21	21. 1. 30	5. 25	·1047	19. 17	·01405			
	***	7. 13	·1054	21. 45	·01548			
11. 11	1. 20	7. 34	·1060		(†)			
16. 47	21. 2. 0	8. 58	·1055					
19. 22	20. 58. 0	9. 20	·1065					
20. 39	20. 57. 20		***					
23. 21	21. 8. 40	9. 49	·1058					
	(†)	11. 30	·1056					
		11. 47	·1059					
		13. 13	·1057					
		15. 15	·1063					
		17. 18	·1063					
		21. 0	·1040					
		23. 0	·1032					
			(†)					
Sept. 10		Sept. 10		Sept. 10		Sept. 10		
1. 0	21. 10. 26*		(†)		(†)	1. 0	64 ·7	65 ·5
3. 0	6. 3	1. 0	·1046*	0. 15	·01461	3. 0	66 ·8	67 ·7
9. 0	21. 1. 59*	1. 51	·1041	2. 7	·01223	9. 0	65 ·0	67 ·0
21. 0	20. 58. 7*	2. 47	·1047	4. 8	·00910	20. 0	56 ·9	58 ·9
		8. 15	·1053	5. 29	·00802	21. 0	56 ·7	58 ·6
		12. 13	·1065		·00850	22. 0	57 ·2	59 ·3
		15. 51:	·1080	8. 58	·00942	23. 0	57 ·8	60 ·2
		19. 3	·1070	20. 6	·01870			
		19. 21	·1073	23. 59	·01508			
		20. 30	·1063					
		23. 15	·1061					
			(†)					
Sept. 11		Sept. 11		Sept. 11		Sept. 11		
0. 0	21. 9. 20	0. 0	·1057	0. 0	·01508	0. 0	59 ·3	60 ·7
1. 45	10. 15		***	1. 21	·01410	1. 0	60 ·8	61 ·8
4. 58	0. 0	1. 5	·1060	4. 45	·00866	2. 0	62 ·0	63 ·7
5. 52	1. 20		***		(†)	3. 0	63 ·0	65 ·3
10. 15	1. 30	3. 36	·1053	9. 10	·00661*	4. 0	64 ·0	66 ·0
	(†)	4. 10	·1059	18. 7	·01291	6. 0	65 ·7	67 ·3
19. 4	1. 0	4. 36	·1050	22. 16	·01620	9. 10	64 ·7	66 ·6
19. 42	0. 0	5. 25	·1057		(†)	12. 0	63 ·5	66 ·0
22. 52	7. 50	5. 56	·1057			20. 0	57 ·5	59 ·0
	(†)	7. 17	·1064			21. 0	58 ·0	59 ·8
			***			22. 0	58 ·6	60 ·1
		8. 18	·1061			23. 0	59 ·3	60 ·7
			***					
		10. 15	·1069					
			***					
		12. 36	·1067					
			***					
		17. 35	·1079					
			***					
		19. 16	·1083					
			***					
		21. 7	·1070					
			***					
		23. 59	·1068					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 12		Sept. 12		Sept. 12		Sept. 12		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	0. 0	·1068		(†)	0. 0	61·6	63·5
0. 13	21. 7. 0		***	1. 7	·01362	1. 0	62·8	64·7
1. 35	8. 0	1. 55	·1066	8. 58:	·00602	2. 0	64·0	65·6
4. 0	3. 10		***	13. 0	·00773	3. 0	65·3	66·8
	***	4. 30	·1072	21. 5	·01433	4. 0	66·5	68·0
5. 25	3. 15	4. 47	·1069	22. 14	·01482	9. 0	67·0	68·6
7. 53	1. 50	6. 15	·1076	23. 12	·01472	21. 0	62·0	62·8
8. 15	0. 5	8. 43	·1075		(†)			
8. 35	21. 1. 0	9. 6	·1087					
8. 57	20. 57. 20	9. 18	·1079					
9. 17	21. 1. 0	9. 42	·1083					
9. 30	20. 59. 35	10. 6	·1077					
	***	10. 36	·1081					
10. 25	21. 2. 15	10. 47	·1088					
11. 0:	1. 10	10. 58	·1083					
11. 55	3. 0	11. 27:	·1087					
12. 25	1. 20	11. 46	·1079					
12. 40	4. 0	12. 9	·1087					
13. 7	21. 0. 0		***					
14. 0	20. 57. 5	13. 47	·1077					
14. 38	58. 40		***					
15. 30	20. 58. 30	17. 2	·1086					
	(†)		***					
18. 45	21. 3. 30	19. 47	·1071					
	***		***					
22. 10	7. 20	22. 13	·1069					
	(†)		(†)					
Sept. 13		Sept. 13		Sept. 13		Sept. 13		
	(†)		(†)		(†)	1. 0	61·5	63·2
0. 36	21. 6. 10	1. 0	·1081	1. 0	·01170	3. 0	61·8	63·0
4. 57	1. 5	1. 30	·1083	1. 50	·01236	9. 0	61·8	62·9
5. 52	1. 40	3. 25	·1072	3. 29	·01207	21. 0	58·0	59·8
6. 35	0. 20	5. 43	·1086	5. 45	·01270			
8. 12	21. 1. 15	7. 21	·1091	8. 6	·01285			
8. 46	20. 59. 30	9. 37	·1077	13. 7	·01410			
9. 44	20. 59. 0	11. 11	·1086		·01233			
11. 17	21. 2. 15	17. 6	·1088	17. 10	·01410			
16. 42	0. 50	18. 43	·1082	20. 48:	·01528			
17. 44	3. 10	19. 55	·1087	22. 46	·01470			
18. 58	2. 0	21. 25	·1071		(†)			
22. 56	12. 40	21. 31	·1077					
23. 12	11. 50	22. 0	·1063					
	(†)	22. 26	·1067					
		22. 41	·1060					
		23. 10	·1068					
		23. 21	·1062					
		23. 46	·1061					
			(†)					
Sept. 14		Sept. 14		Sept. 14		Sept. 14		
	(†)		(†)	0. 0	·01483	1. 0	61·8	62·7
0. 20	21. 11. 5	0. 17	·1069	6. 45	·00925	3. 0	63·2	64·7
2. 0	13. 0	0. 49	·1053	9. 47:	·00869	9. 10	63·3	65·0
4. 55	1. 10	1. 30	·1056	12. 13	·00930	22. 35	56·0	57·0
8. 5:	0. 0	1. 58	·1051	13. 45	·01006			
10. 30	2. 0	2. 36	·1039	20. 6	·01418			
14. 14	2. 5	3. 7	·1051		***			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 14		Sept. 14		Sept. 14				
h m	° ′ ″	h m		h m		h m	°	°
19. 5	21. 0. 0	3. 48	·1051	23. 59	·01559			
19. 56	20. 58. 10	4. 27	·1060					
21. 17	21. 2. 15	4. 46	·1056					
23. 20	7. 50	5. 17	·1067					
	(†)		***					
		6. 34	·1067					
		8. 33	·1074					
		10. 5	·1073					
		14. 53	·1079					
			***					
		18. 56	·1084					
			***					
		21. 15	·1073					
			***					
		23. 2	·1076					
			(†)					
Sept. 15		Sept. 15		Sept. 15		Sept. 15		
0. 0	21. 7. 40	0. 0	·1076	0. 0	·01559	9. 0	58·8	60·7
0. 13	8. 20	0. 15	·1065		***	21. 0	57·5	59·0
0. 28	7. 30	0. 33	·1079	4. 46	·01412			
0. 44	10. 10	0. 54	·1075	9. 30	·01410			
1. 26	21. 12. 30		(†)	9. 48	·01368			
2. 2	20. 56. 0	2. 10	·1073	10. 18	·01390			
2. 33	21. 8. 20	3. 15	·1071	11. 6	·01318			
2. 40	7. 50	3. 40	·1082	11. 39	·01395			
2. 46	10. 30	4. 10	·1067	12. 17	·01395			
3. 15	7. 20	4. 36	·1060	12. 48	·01208			
	***		***	13. 27	·01329			
3. 45	8. 10	5. 10	·1074	14. 6	·01325			
4. 0	11. 30	5. 15	·1066		***			
4. 33	9. 45	6. 42	·1082	16. 22	·01550			
4. 46	11. 30	7. 0	·1066	18. 17	·01562			
4. 54	10. 5	7. 22	·1084		·01523			
5. 18	9. 40	8. 1	·1079	22. 16	·01660			
5. 42	13. 30	8. 26	·1086	23. 59	·01657			
	***	8. 54	·1070					
6. 36	5. 30	9. 26	·1063					
7. 10	10. 10	9. 52	·1061					
7. 39	21. 9. 30	10. 29	·1035					
	***	10. 43	·1033					
9. 6	20. 57. 30	10. 52	·1039					
9. 22	21. 0. 30	10. 56	·1035					
	***	11. 11	·1044					
10. 10	20. 54. 10	11. 21	·1034					
10. 39	42. 30	11. 42	·1026					
11. 0	50. 40	12. 7	·1053					
11. 13	47. 30	12. 13	·1048					
11. 41	54. 40	12. 30	·1048					
11. 57	46. 20	12. 39	·1058					
12. 22	54. 0	12. 44	·1054					
12. 42	56. 10	12. 52	·1060					
13. 0	20. 44. 20	13. 0	·1050					
	(†)	13. 11	·1070					
14. 30	21. 3. 30	13. 21	·1066					
14. 51	21. 1. 50	14. 26	·1071					
15. 14	20. 57. 0	15. 30	·1061					
15. 29	58. 0	15. 45	·1065					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 9, 11, 13 and 15. The times of both the Declination and Horizontal Force are doubtful to the amount of 5 or 10 minutes.

September 10. The Photographic Trace of the Declination Magnet was too faint for use.

September 10. The times of the Horizontal Force may be 5 or 10 minutes in error.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 15		Sept. 15						
h m	° ′ ″	h m		h m		h m	°	°
15. 45	20. 52. 35	16. 10	·1052					
15. 51	53. 40	18. 9	·1042					
16. 2	51. 20	18. 34	·1021					
16. 14	52. 0	19. 4	·1038					
16. 21	50. 45	19. 40	·1031					
16. 48	20. 55. 0	20. 13	·1045 ***					
17. 14	21. 0. 45							
17. 25	20. 59. 30	21. 15	·1031					
17. 42	21. 1. 15	21. 26	·1040					
18. 0	7. 40	22. 26	·1032					
18. 12	9. 0	22. 47	·1050					
18. 29	6. 30	23. 36	·1020					
18. 59	6. 0	23. 59	·1042					
19. 20	8. 50							
19. 42	3. 40							
19. 50	6. 30							
20. 0	2. 50							
20. 13	6. 0							
20. 21	5. 5							
20. 30	7. 15							
20. 46	8. 30							
20. 58	8. 0							
21. 56	9. 30							
22. 21	8. 0							
22. 27	10. 10							
22. 40	9. 0							
22. 51	12. 45							
23. 6	12. 0							
23. 21	13. 5							
23. 48	10. 10							
23. 59	11. 0							
Sept. 16		Sept. 16		Sept. 16		Sept. 16		
	(†)		(†)	0. 0	·01637	1. 0	59 ·5	61 ·0
1. 0	21. 10. 21*	1. 0	·1043*	7. 10	·01262	3. 0	60 ·4	62 ·0
3. 0	3. 42*	1. 6	·1050 ***	9. 13	·01207	9. 0	59 ·5	61 ·0
4. 8	0. 25			10. 45	·01230	21. 0	55 ·8	57 ·3
4. 26	1. 45	1. 22	·1057 ***	12. 36	·01322			
4. 46	0. 30			12. 50	·01275			
5. 30	21. 0. 35	1. 56	·1045	14. 45	·01376			
6. 0	20. 57. 30	2. 17	·1057	15. 30	·01364			
6. 40	21. 1. 0	2. 40	·1046	18. 26	·01612			
7. 25	0. 0	3. 12	·1058	21. 8	·01730			
7. 51	21. 1. 0		(†)	22. 4	·01672			
8. 16	20. 59. 20	4. 0	·1054	23. 30	·01629			
8. 39	21. 1. 55	4. 17	·1065		(†)			
9. 8	20. 57. 10	4. 41	·1052					
9. 24	21. 0. 30	4. 53	·1060					
9. 55	20. 58. 25	5. 6	·1056					
10. 10	21. 0. 10	5. 18	·1061					
10. 25	20. 59. 0	5. 36	·1053					
10. 44	21. 2. 0	5. 45	·1062					
11. 0	21. 0. 10	5. 47	·1055					
12. 2	20. 58. 5	6. 10	·1057					
12. 32	21. 11. 15	6. 21	·1053					
12. 54	21. 2. 10 ***	6. 46	·1068					
		7. 7	·1057					
14. 10	20. 57. 35 (†)	7. 32	·1065 ***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 16		Sept. 16						
h m	° ′ ″	h m		h m		h m	°	°
16. 0	20. 59. 30 ***	8. 45	·1070					
		9. 6	·1082					
18. 45	20. 58. 45 ***	9. 36	·1073					
		10. 7	·1090 ***					
20. 3	21. 2. 0 ***							
		10. 48	·1072 ***					
20. 50	0. 15							
21. 15	4. 50	12. 17	·1067					
21. 45	3. 40	12. 34	·1086					
22. 14	8. 0	12. 43	·1079					
22. 45	7. 25	12. 56	·1087					
23. 20	9. 10 (†)	13. 29	·1072					
		14. 40	·1073					
		14. 57	·1080					
		15. 13	·1073					
		15. 35	·1080 ***					
		16. 17	·1070 ***					
		18. 38	·1071 ***					
		20. 56	·1055 ***					
		21. 45	·1057					
		22. 13	·1044 ***					
		23. 59	·1058					
Sept. 17		Sept. 17		Sept. 17		Sept. 17		
	(†)	0. 0	·1058		(†)	1. 0	59 ·2	60 ·4
0. 10	21. 10. 0	1. 43	·1046	1. 0	·01265*	3. 0	61 ·0	62 ·6
0. 36	11. 5	2. 46	·1046 ***	1. 36	·01242	9. 0	62 ·0	63 ·5
1. 0	9. 35			3. 0:	·01171	20. 0	55 ·8	59 ·0
1. 20	11. 30	4. 15	·1064	4. 26	·00968	21. 0	55 ·8	58 ·3
1. 30	9. 0	5. 20	·1047 ***	5. 15	·00880 ***	22. 0	56 ·2	58 ·5
3. 7	3. 0 ***					23. 0	56 ·8	59 ·3
		5. 45	·1048	6. 47	·00988			
4. 58	21. 1. 55	6. 6	·1071	9. 38	·01030			
5. 25	20. 58. 10	6. 35	·1049	14. 40:	·01129			
5. 40	54. 50	6. 40	·1055	18. 26	·01361			
6. 0	59. 10	6. 46	·1052	22. 52	·01690			
6. 20	55. 35	7. 5	·1059	23. 59	·01691			
6. 45	55. 0	7. 34	·1052 ***					
7. 3	57. 0							
7. 25	49. 10	8. 3	·1069					
7. 30	50. 5	8. 14	·1058					
7. 39	48. 10	8. 21	·1070					
7. 55	54. 0	8. 39	·1070 ***					
8. 5	52. 0							
8. 30	59. 0	9. 36	·1048					
8. 47	59. 5	9. 47	·1056					
9. 25	54. 0	10. 6	·1052 ***					
9. 47	56. 0							
10. 0	20. 55. 10	11. 15	·1064 ***					
10. 40	21. 0. 15 ***							
		15. 16	·1068 ***					
12. 25:	2. 0							
14. 50	2. 30	16. 26	·1075 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 17		Sept. 17						
h m	° ′ ″	h m		h m		h m	°	°
15. 51	21. 0. 35	17. 10	·1067					
16. 30	5. 0		***					
16. 47	4. 30	18. 23	·1078					
17. 20	1. 5	19. 29	·1065					
18. 55	21. 2. 0	19. 56	·1066					
19. 45	20. 58. 30		***					
	***	21. 12	·1048					
21. 16	21. 8. 0		***					
	***	22. 6	·1060					
23. 0	11. 5	22. 17	·1055					
	(†)		***					
		23. 8	·1065					
			***					
		23. 59	·1061					
Sept. 18		Sept. 18		Sept. 18		Sept. 18		
0. 0	21. 13. 0	0. 0	·1061	0. 0	·01691	0. 0	57 ·3	59 ·7
5. 30	21. 1. 40		(†)	3. 17	·00978	1. 0	59 ·3	60 ·4
6. 30	20. 55. 30	1. 0	·1052*	5. 11	·01173	2. 0	61 ·0	62 ·5
7. 30	58. 30	1. 36	·1056	6. 45	·01230	3. 0	63 ·1	65 ·0
	***	2. 11	·1056		(†)	4. 0	64 ·0	66 ·5
8. 45	57. 0	3. 10	·1044	9. 0	·01178*	6. 0	65 ·2	66 ·5
9. 11	50. 0		***	20. 37	·01651	9. 0	64 ·8	66 ·2
9. 20	53. 45	5. 41	·1044	21. 39	·01670	12. 0	64 ·0	65 ·3
9. 31	48. 0	5. 50	·1049	22. 7	·01658	18. 0	60 ·4	62 ·3
9. 52	53. 30		***		(†)	20. 0	60 ·0	61 ·2
10. 20	57. 0	6. 44	·1042			21. 0	60 ·0	61 ·3
10. 48	55. 20	7. 7	·1054			22. 0	60 ·4	61 ·9
11. 10	57. 10	7. 23	·1046			23. 0	61 ·0	62 ·5
13. 25	20. 54. 0	7. 37	·1052					
14. 15	21. 2. 5	7. 49	·1046					
15. 28	20. 57. 30	9. 5	·1051					
16. 45	21. 0. 5	9. 36	·1077					
17. 15	21. 0. 10	9. 42	·1061					
17. 40	20. 58. 0	10. 6	·1077					
	***		***					
19. 9	20. 57. 35	10. 56	·1049					
19. 20	21. 0. 0	11. 15	·1056					
19. 28	20. 58. 40	11. 42	·1052					
19. 40	21. 1. 10		***					
19. 50	0. 15	13. 15	·1069					
22. 0	12. 0		* **					
22. 40	10. 45	14. 14	·1064					
23. 10	12. 50	14. 42	·1054					
	(†)	15. 26	·1075					
		16. 7	·1065					
			***					
		17. 16	·1061					
		18. 45	·1068					
			***					
		19. 17	·1057					
			***					
		20. 16	·1062					
			***					
		21. 41	·1044					
			***					
		22. 16	·1044					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Sept. 18						
h m	° ′ ″	h m		h m		h m	°	°
		22. 50	·1051					
		23. 59	·1050					
Sept. 19		Sept. 19		Sept. 19		Sept. 19		
1. 0	21. 16. 20*		(†)		(†)	1. 0	62 ·7	64 ·2
3. 0	21. 12. 41*	1. 0	·1076*	0. 40	·01605	2. 0	63 ·7	65 ·4
9. 0	20. 57. 24*	3. 0	·1051	3. 0	·01450	3. 0	64 ·8	66 ·7
21. 0	21. 4. 10	3. 30	·1043	3. 45	·01462	4. 0	65 ·0	67 ·0
		3. 58	·1074	6. 10	·01190	9. 0	64 ·2	65 ·7
		4. 27	·1072		·01242	21. 0	61 ·2	61 ·7
		4. 46	·1056	9. 36	·01270			
		5. 11	·1055	11. 45	·01392			
		5. 26	·1045	12. 17	·01403			
		5. 44	·1055	16. 13	·01690			
		6. 27	·1031	17. 5	·01712			
		6. 51	·1041	17. 33	·01690			
		7. 0	·1036	21. 57	·01968			
		7. 14	·1043	23. 59	·01998			
			***					
		8. 1	·1039					
		8. 28	·1047					
		8. 45	·1045					
		9. 27	·1058					
		9. 43	·1051					
		10. 13	·1061					
		10. 42	·1060					
		12. 7	·1069					
		13. 10	·1059					
		13. 31	·1065					
		13. 54	·1062					
		16. 9	·1077					
		16. 55	·1076					
		17. 13	·1091					
			***					
		18. 40	·1073					
		19. 17	·1057					
		20. 58	·1041					
		21. 39	·1049					
		21. 52	·1046					
		23. 37	·1051					
			(†)					
Sept. 20		Sept. 20		Sept. 20		Sept. 20		
	(†)		(†)	0. 0	·01998	1. 0	62 ·8	64 ·2
1. 0	21. 10. 54*	1. 0	·1066*	2. 0	·01943	3. 0	65 ·3	65 ·7
2. 18	21. 9. 0	3. 0	·1062*	2. 48	·01887	9. 0	63 ·8	65 ·3
4. 44	20. 59. 0	3. 7	·1051	3. 30	·01790	21. 0	56 ·8	58 ·3
5. 7	20. 56. 15	3. 28	·1040	4. 8	·01751			
5. 54	21. 0. 35	4. 7	·1054	7. 17	·01427			
12. 0	21. 1. 40	4. 18	·1051	11. 13	·01510			
	(†)	4. 47	·1035	15. 40	·01822			
21. 0	20. 57. 55	5. 17	·1053	19. 36	·02170			
		6. 38	·1058	21. 47	·02322			
		7. 45	·1056	23. 59	·02190			
		12. 16	·1063					
			***					
		16. 13	·1079					
		16. 38	·1075					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 19. The Photographic Trace of the Declination was too faint for use, and the times of the Horizontal Force are somewhat doubtful.

September 20. The times of both the Declination and Horizontal Force may be in error to the amount of 5 or 10 minutes.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Sept. 20 h m		h m		h m	°	°
		17. 47	·1080 ***					
		19. 9	·1066					
		19. 36	·1067 ***					
		22. 43	·1039 (†)					
Sept. 21		Sept. 21		Sept. 21		Sept. 21		
	(†)		(†)	0. 0	·02190	1. 0	59 ·8	60 ·2
0. 40	21. 7. 40	1. 0	·1059*	7. 15:	·01933	3. 0	61 ·3	61 ·8
1. 30	21. 8. 30	1. 46	·1068 ***	12. 12	·01968	9. 0	61 ·5	62 ·0
5. 5	20. 59. 35			19. 20	{·02276	22. 17	58 ·0	60 ·1
7. 10	21. 2. 0	4. 36	·1075		{·02210			
17. 30:	21. 1. 0	5. 15	·1071 ***	22. 45	·02022 (†)			
19. 22	20. 57. 5							
20. 40	20. 57. 20	7. 25	·1081 ***					
23. 0	21. 7. 0 (†)	9. 46	·1077					
		17. 17	·1084					
		18. 22	·1082					
		21. 5	·1056					
		21. 26	·1059 ***					
		22. 47	·1048 ***					
		23. 59	·1054					
Sept. 22		Sept. 22		Sept. 22		Sept. 22		
	(†)	0. 0	·1054 ***	0. 0	·02005	10. 8	60 ·8	63 ·0
1. 20	21. 8. 35			4. 3	·02002	21. 0	61 ·3	62 ·3
5. 55	0. 0	0. 56	·1063	7. 46	·01922			
6. 50:	1. 5	1. 20	·1062	10. 17	·01936			
8. 7	0. 30	1. 36	·1065	14. 12	·02030			
9. 30	1. 30	1. 43	·1061 ***	15. 18	·02076			
13. 0	0. 35			22. 16	·02050			
13. 15	21. 4. 10	2. 37	·1072 ***	23. 59	·01962			
14. 40	20. 58. 35							
17. 10	59. 0	5. 19	·1077 ***					
19. 8	57. 0							
20. 15	20. 58. 5	9. 56	·1085 ***					
22. 45:	21. 7. 25							
23. 59	21. 10. 0	12. 48	·1083 ***					
		13. 29	·1090					
		13. 50	·1091					
		14. 36	·1085					
		17. 47	·1079					
		21. 9	·1051					
		22. 56	·1051 (†)					
Sept. 23		Sept. 23		Sept. 23		Sept. 23		
0. 0	21. 10. 0		(†)	0. 0	·01962	1. 0	62 ·8	63 ·7
0. 45	10. 10	1. 0	·1060*	3. 49	·01805	3. 0	64 ·0	65 ·0
1. 29	9. 0	2. 44	·1069	5. 35	·01690	9. 0	63 ·0	64 ·5
2. 7	11. 35	2. 56	·1064	6. 17	·01690	21. 0	57 ·0	58 ·7

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 23 h m	° ′ ″	Sept. 23 h m		Sept. 23 h m		h m	°	°
2. 27	21. 10. 35	3. 25	·1068	8. 13	·01622			
3. 18	7. 30	3. 54	·1053	10. 0	·01673			
3. 32	7. 40	4. 15	·1056	10. 48	·01609			
3. 44	9. 55	4. 29	·1074	11. 43	·01702			
3. 55	8. 20	4. 44	·1085	18. 25	{·02106			
4. 7	10. 20	5. 22	·1064		{·02062			
4. 11	7. 40	5. 51	·1061	21. 17	·01879			
4. 30	10. 15	6. 13	·1068	23. 59	·01802			
5. 18	7. 10	6. 29	·1059					
5. 36	7. 10	6. 44	·1059					
6. 15	0. 0	7. 7	·1074					
6. 39	4. 30	7. 46	·1070					
7. 15	0. 25	8. 5	·1080					
7. 29	21. 2. 40	8. 32	·1075					
7. 51	20. 59. 40	8. 43	·1077					
8. 12	21. 3. 30	8. 47	·1062 ***					
8. 22	2. 20							
8. 31	3. 30	9. 42	·1062					
9. 22	21. 0. 55	10. 22	·1024					
9. 48	20. 49. 20	10. 41	·1042					
10. 14	57. 0	10. 51	·1036					
10. 21	55. 20	11. 1	·1049					
10. 28	57. 30	11. 15	·1016					
10. 54	48. 0	11. 45	·1022					
11. 15	54. 40	12. 16	·1044 ***					
11. 26	53. 20							
12. 11	20. 59. 45	13. 54	·1057					
14. 15	21. 2. 20 ***	14. 2	·1052					
		14. 12	·1056 ***					
16. 39	21. 1. 0							
16. 44	20. 59. 20	17. 44	·1075					
17. 10	20. 58. 45	18. 0	·1065					
17. 13	21. 0. 15	18. 13	·1068					
17. 46	20. 55. 50	18. 20	·1064					
18. 0	58. 10	18. 28	·1069					
18. 13	20. 57. 0	18. 34	·1062					
18. 28	21. 0. 55	19. 3	·1064					
18. 43	20. 57. 15	19. 29	·1056					
18. 56	58. 50 ***	20. 13	·1063					
		20. 27	·1056					
19. 26	56. 25 ***	20. 42	·1060					
		20. 57	·1051 ***					
19. 43	58. 50 ***							
		21. 43	·1051 ***					
20. 37	20. 56. 40 ***							
		22. 57	·1060					
21. 40	21. 5. 0 ***	23. 10	·1052					
		23. 30	·1056					
22. 39	4. 45	23. 59	·1051					
22. 51	8. 30							
23. 10	6. 30							
23. 59	6. 50							
Sept. 24		Sept. 24		Sept. 24		Sept. 24		
	(†)		(†)	0. 0	·01802	1. 0	60 ·2	61 ·1
1. 0	21. 7. 18*	1. 0	·1051	4. 37	·01480	3. 0	62 ·2	62 ·5
2. 15	10. 40	1. 47	·1051	9. 16:	·01271	9. 0	63 ·2	63 ·0
2. 28	12. 15	2. 13	·1069	12. 56	·01362	20. 0	57 ·0	59 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.24		Sept.24		Sept.24		Sept.24		
h m	° ′ ″	h m		h m		h m	°	°
2. 43	21. 12. 20	2. 42	·1032	21. 45	·01825	21. 0	57 ·0	58 ·8
3. 0	8. 0	2. 56	·1056	22. 17	·01804	22. 0	57 ·0	58 ·7
4. 13:	3. 20	3. 40:	·1046	22. 50	·01830	23. 0	57 ·2	58 ·7
	***	5. 12	·1063		·01786			
9. 20	21. 1. 45		***	23. 18	·01775			
10. 10	20. 57. 0	6. 46	·1068		(†)			
10. 19	58. 10	6. 57	·1079					
10. 50	54. 0	7. 15	·1065					
11. 19	49. 15		***					
12. 30	56. 0	9. 38	·1064					
12. 45	20. 54. 20		***					
14. 20	21. 1. 55	11. 37	·1074					
15. 24	1. 0		***					
18. 20	21. 1. 0	12. 56	·1056					
	***		***					
20. 25	20. 58. 10	16. 25	·1072					
	***		***					
21. 44	21. 0. 30	18. 13	·1073					
23. 0	7. 35		***					
23. 24	6. 0	20. 48	·1057					
	***		***					
23. 59	8. 0	22. 17	·1059					
		22. 35	·1046					
		22. 50	·1051					
		22. 56	·1047					
			***					
		23. 59	·1063					
Sept.25		Sept.25		Sept.25		Sept.25		
0. 0	21. 8. 0	0. 0	·1063		(†)	0. 0	58 ·0	59 ·0
0. 40	6. 0	0. 17	·1040	1. 17	·01430	1. 0	58 ·5	59 ·5
0. 54	13. 30	0. 43	·1043	3. 8	·01392	2. 0	59 ·1	60 ·1
	***	1. 4	·1058	7. 46:	·01206	3. 0	60 ·0	60 ·8
1. 55	8. 0	1. 56	·1043	14. 42	·01291	4. 0	60 ·5	61 ·0
2. 10	12. 0		***	20. 41	·01543	6. 0	61 ·0	62 ·2
2. 44	13. 35	3. 37	·1064	23. 6	·01583	9. 0	60 ·1	62 ·0
2. 58	7. 0		***	23. 59	·01542	12. 0	59 ·5	62 ·0
	***	4. 8	·1057			18. 0	56 ·7	58 ·7
4. 30	6. 30		***			20. 0	56 ·0	58 ·5
5. 44	21. 3. 55	5. 26	·1076			21. 0	56 ·6	57 ·5
6. 10	20. 59. 20	5. 51	·1067			22. 0	57 ·0	58 ·7
6. 20	21. 0. 15	6. 35	·1078			23. 0	57 ·3	59 ·2
6. 52	20. 51. 0	6. 43	·1067					
7. 7	55. 0	6. 56	·1086					
7. 41	57. 10	7. 8	·1067					
8. 6	57. 0	7. 15	·1072					
8. 25	59. 30		***					
8. 54	57. 0	8. 7	·1058					
9. 25	59. 0		***					
10. 10	56. 10	11. 43	·1070					
10. 40	20. 58. 55	12. 0	·1075					
11. 45	21. 1. 0		***					
12. 5	0. 0	15. 47	·1070					
14. 0	9. 15	17. 0	·1076					
14. 15	7. 0		***					
14. 47	6. 35	19. 8	·1076					
15. 13	11. 30		***					
15. 39	8. 0	23. 20	·1057					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.25		Sept.25				Sept.26		
h m	° ′ ″	h m		h m		h m	°	°
15. 53	21. 1. 20	23. 59	·1060			0. 0	58 ·3	59 ·8
16. 10	4. 10					1. 0	59 ·0	60 ·3
17. 23	1. 0					2. 0	60 ·0	61 ·2
	***					3. 0	61 ·0	62 ·0
18. 30	21. 1. 0					4. 0	61 ·5	62 ·0
	***					9. 0	61 ·5	62 ·5
20. 50:	20. 58. 0					21. 0	53 ·1	55 ·6
	***							
23. 59	21. 7. 0							
Sept.26		Sept.26		Sept.26		Sept.26		
0. 0	21. 7. 5	0. 0	·1060	0. 0	·01542	0. 0	58 ·3	59 ·8
1. 5	8. 30		***	1. 6	·01510	1. 0	59 ·0	60 ·3
1. 38	6. 20	1. 3	·1063	7. 7	·01072	2. 0	60 ·0	61 ·2
1. 50	8. 10	1. 19	·1054	9. 52:	·01021	3. 0	61 ·0	62 ·0
	***	1. 45	·1062	12. 17	·01080	4. 0	61 ·5	62 ·0
2. 51	7. 5		***		·01823	9. 0	61 ·5	62 ·5
3. 55	4. 0	3. 7	·1059	22. 22	·01650	21. 0	53 ·1	55 ·6
4. 10	21. 4. 5		***	23. 34	·01650			
4. 54	20. 58. 30	3. 49	·1064		(†)			
6. 15:	21. 1. 35	4. 35	·1053					
7. 0	0. 30	5. 2	·1069					
7. 23	21. 1. 0	5. 35	·1071					
8. 0	20. 56. 30	5. 46	·1066					
8. 14	57. 30	6. 36	·1069					
8. 50	52. 40	6. 48	·1065					
9. 30	59. 0	7. 15	·1072					
12. 50	20. 58. 0	7. 47	·1066					
13. 25	21. 1. 0	8. 10	·1066					
	***							
15. 0	1. 10	8. 25	·1059					
15. 30	2. 25	9. 3	·1078					
15. 58	1. 30		***					
16. 30	3. 30	9. 45	·1068					
18. 15	21. 1. 45		***					
20. 0:	20. 57. 35	11. 37	·1071					
23. 59	21. 5. 0	12. 8	·1076					
			***					
		13. 10	·1072					
			***					
		15. 27	·1077					
		16. 34	·1083					
			***					
		18. 4	·1080					
			***					
		20. 16	·1081					
			***					
		21. 55	·1070					
		22. 7	·1075					
		22. 36	·1063					
		23. 59	·1060					
Sept.27		Sept.27		Sept.27		Sept.27		
0. 0	21. 5. 0	0. 0	·1060		(†)	1. 0	58 ·7	59 ·1
1. 40:	6. 0		***	1. 0	·01550*	3. 0	62 ·3	63 ·0
3. 45	21. 2. 10	2. 6	·1058	1. 26	·01490	9. 0	62 ·4	63 ·5
6. 0	20. 59. 20		***	4. 40	·00990	21. 0	59 ·0	60 ·0
9. 33	21. 0. 10	3. 0	·1061	7. 25	·01232			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.27		Sept.27		Sept.27				
h m	° ′ ″	h m		h m		h m	°	°
9. 55	20. 56. 30	4. 3:	·1057	15. 44	·01450			
11. 15	21. 0. 30	5. 13	·1062	20. 33	·01655			
15. 10	0. 35		***	23. 10	·01702			
15. 25	2. 10	7. 23	·1068	23. 59	·01690			
15. 40	0. 30	9. 30	·1073					
16. 25	0. 0	10. 5	·1081					
16. 54	2. 45	10. 36	·1073					
17. 30	21. 0. 0		* *					
19. 50:	20. 58. 0	11. 40	·1076					
21. 7	21. 2. 0		***					
22. 45	4. 20	16. 35	·1079					
23. 30	6. 30	17. 17	·1093					
23. 59	7. 10	18. 8	·1091					
			* *					
		20. 56	·1059					
		21. 45	·1063					
		22. 17	·1056					
		23. 59	·1059					
Sept.28		Sept.28		Sept.28		Sept.28		
0. 0	21. 7. 10	0. 0	·1059	0. 0	·01690	1. 15	61 ·2	62 ·0
1. 0:	8. 0	3. 57	·1064	1. 17	·01668	3. 0	62 ·2	63 ·0
4. 15:	1. 50	5. 8	·1067	5. 25	·01470	9. 0	62 ·5	63 ·2
6. 30	21. 0. 0	5. 46	·1073	8. 47:	·01418	22. 15	62 ·0	62 ·5
6. 52	20. 57. 0	6. 43	·1067	15. 13	·01579			
8. 25:	21. 1. 10	7. 7	·1060	21. 12	·01642			
14. 0	20. 59. 10	7. 45	·1069	23. 59	·01550			
19. 15	20. 57. 50	9. 7	·1078					
20. 45	21. 3. 20		***					
23. 59	7. 0	13. 35	·1083					
		18. 6	·1081					
		20. 39	·1068					
		21. 36	·1055					
		22. 18	·1055					
		23. 3	·1047					
		23. 59	·1056					
Sept.29		Sept.29		Sept.29		Sept.29		
0. 0	21. 7. 0	0. 0	·1056	0. 0	·01550	10. 10	63 ·0	63 ·5
1. 30:	7. 0	2. 6	·1057	4. 6	·01276	21. 0	60 ·0	61 ·2
3. 15	21. 2. 45	2. 35	·1051		·01322			
5. 15	20. 59. 5	5. 26	·1060	7. 18	·01509			
5. 45	21. 0. 25	5. 47	·1058	9. 15	·01563			
7. 0	21. 0. 15	6. 38	·1066	12. 26:	·01632			
7. 22	20. 57. 0	7. 7:	·1064	20. 12	·02067			
	***	7. 35	·1067	23. 59	·02110			
9. 0	21. 0. 5	7. 46	·1061					
11. 0	1. 0	8. 21	·1067					
11. 20	2. 30		***					
11. 45	1. 5	11. 47	·1078					
12. 41	21. 1. 45	12. 35	·1075					
17. 25	20. 59. 0	17. 7	·1084					
18. 30	58. 0		***					
19. 30	59. 30	19. 16	·1081					
19. 55	20. 58. 25		***					
21. 30	21. 1. 0	22. 23	·1063					
22. 30	6. 0		***					
23. 40	6. 5	23. 10	·1062					
	(†)		(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.30		Sept.30		Sept.30		Sept.30		
h m	° ′ ″	h m		h m		h m	°	°
	(†)		(†)	0. 0	·02110	1. 0	63 ·8	64 ·5
1. 0	21. 6. 0	0. 26	·1058	5. 7	·01482	3. 0	66 ·6	67 ·5
1. 21	5. 10	1. 5	·1056		·01510	9. 0	68 ·0	69 ·0
1. 36	6. 20	1. 49	·1061	8. 26	·01832	21. 0	65 ·0	66 ·0
4. 15:	21. 2. 0	4. 56	·1062	10. 42	·01893			
6. 45	20. 58. 45	6. 45	·1068	13. 16	·01945			
	(†)	7. 34	·1057	18. 47	·02150			
9. 0	21. 0. 40*	8. 17	·1069	22. 13	·02230			
13. 13	0. 20		***	23. 59	·02203			
13. 57	21. 1. 0	10. 50	·1072					
18. 37	20. 59. 10	11. 45	·1080					
20. 36	20. 56. 40	12. 20	·1074					
22. 28	21. 5. 5	13. 35	·1073					
23. 59	4. 20	14. 3	·1077					
		18. 20	·1079					
			(†)					
		21. 0	·1066*					
Oct. 1		Oct. 1		Oct. 1		Oct. 1		
	(†)		(†)	0. 0	·02203	1. 0	66 ·8	68 ·0
0. 10	21. 6. 0	1. 0	·1071*		***	3. 0	68 ·3	69 ·3
3. 45:	3. 0	1. 26	·1071	4. 18	·02012	9. 0	69 ·2	71 ·3
7. 43	21. 0. 35	3. 15	·1076	6. 6	·01883	20. 0	65 ·5	66 ·9
8. 1	20. 59. 0	4. 47	·1073		·01960	21. 0	65 ·0	66 ·8
8. 35	21. 1. 0	7. 46	·1078	10. 33	·02073	22. 0	65 ·0	66 ·0
11. 53	0. 15	9. 35	·1077	12. 36	·02090	23. 0	65 ·5	67 ·0
18. 0	21. 1. 0	14. 8	·1079	21. 25	·02451			
20. 50:	20. 57. 0	18. 16	·1085	23. 59	·02463			
21. 45	59. 30	22. 30	·1066					
	(†)		***					
		23. 59	·1070					
Oct. 2		Oct. 2		Oct. 2		Oct. 2		
	(†)	0. 0	·1070	0. 0	·02463	0. 0	65 ·8	67 ·2
0. 45	21. 6. 10	0. 45	·1070		***	1. 0	66 ·1	67 ·5
1. 11	5. 0		***	2. 36	·02372	2. 0	66 ·6	68 ·0
1. 35	6. 30	2. 46	·1054	4. 45	·02163	3. 0	67 ·0	68 ·3
3. 5:	2. 5		***	6. 30	·02175	4. 0	66 ·5	68 ·0
3. 45	21. 3. 0	4. 42	·1074	8. 46	·02246	6. 0	66 ·0	67 ·5
		5. 8	·1065	12. 0	·02483	9. 0	63 ·5	65 ·5
6. 24	20. 59. 30	5. 46	·1079	14. 6	·02605	12. 0	61 ·8	64 ·5
		6. 20	·1056	18. 45	·03005	18. 0	58 ·8	61 ·0
8. 25	21. 0. 10		***	21. 57	·03142	20. 0	59 ·0	61 ·0
9. 25	20. 54. 10	7. 41	·1071	23. 35	·03063	21. 0	59 ·0	61 ·5
10. 25	59. 5		***		(†)	22. 0	59 ·4	61 ·5
11. 15	20. 59. 5	8. 20	·1072			23. 0	59 ·7	61 ·5
12. 10	21. 1. 55	8. 47	·1063					
12. 55	20. 52. 5	9. 35	·1080					
13. 44	57. 35		***					
14. 4	20. 56. 40	11. 30	·1080					
14. 44	21. 0. 50	11. 49	·1089					
15. 15	20. 59. 20	12. 7	·1086					
16. 14	21. 2. 0	12. 36	·1094					
16. 25	0. 15		***					
16. 35	1. 10	13. 32	·1088					
17. 0:	21. 0. 0	14. 17	·1076					
19. 50	20. 57. 35		***					
21. 8	21. 1. 10	15. 36	·1090					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 2		Oct. 2						
h m	° ′ ″	h m		h m		h m	°	°
22. 50	21. 8. 0	16. 19	·1081					
23. 30	8. 0		***					
	(†)	17. 7	·1087					
		18. 25	·1087					
		19. 18	·1092					
		22. 13	·1090					
		22. 39	·1085					
		23. 59	·1085					
Oct. 3		Oct. 3		Oct. 3		Oct. 3		
0. 0	21. 7. 10	0. 0	·1085		(†)	0. 0	60 ·5	62 ·0
0. 30	6. 15	0. 13	·1085	0. 39	·03030	1. 0	61 ·8	63 ·0
1. 5:	7. 30		(†)	1. 47	·02992	2. 0	63 ·0	64 ·4
3. 0	21. 3. 25	1. 0	·1085*	4. 56	·02570	3. 0	64 ·1	66 ·0
5. 36	20. 59. 0	1. 30	·1082	7. 25:	·02442	4. 0	64 ·9	66 ·5
7. 10	20. 58. 50		***	11. 56	·02537	9. 0	64 ·0	65 ·0
8. 40	21. 0. 10	3. 15	·1073		(†)	21. 0	60 ·6	61 ·2
13. 30	21. 1. 0		***	21. 0	·02977*			
	(†)	4. 46	·1070					
21. 16	20. 58. 55	6. 15	·1080					
23. 53	21. 7. 30		***					
	(†)	8. 16	·1083					
		13. 47	·1085					
			(†)					
		21. 0	·1073*					
Oct. 4		Oct. 4		Oct. 4		Oct. 4		
	(†)		(†)		(†)	1. 0	63 ·6	64 ·3
0. 15	21. 8. 0	0. 13	·1060	0. 15	·02963	3. 0	66 ·1	66 ·6
0. 55:	9. 5	2. 26	·1067	2. 45	·02748	9. 0	64 ·2	66 ·0
4. 0:	21. 2. 0	4. 7	·1065	6. 16:	·02350	21. 0	59 ·5	61 ·2
7. 30:	20. 59. 0	9. 8	·1079	8. 48	·02331			
9. 30	21. 0. 10	14. 55	·1083	14. 0	·02506			
15. 30	21. 1. 15		***	20. 15	·02857			
17. 31	20. 58. 55	18. 28	·1091	22. 42	·02920			
18. 20	59. 50		***	23. 59	·02886			
		22. 29	·1073					
20. 45	20. 56. 30	22. 49	·1085					
	***		***					
22. 30	21. 2. 0	23. 26	·1077					
22. 50	7. 20		(†)					
	***							
23. 20	7. 20							
23. 35	5. 0							
23. 59	6. 30							
Oct. 5		Oct. 5		Oct. 5		Oct. 5		
0. 0	21. 6. 30		(†)	0. 0	·02886	1. 0	61 ·8	63 ·0
0. 53	10. 0	1. 0	·1081*	2. 41	·02847	3. 0	63 ·6	65 ·3
	***	1. 27	·1077	7. 0	·02439	9. 0	66 ·5	68 ·0
1. 40	7. 0	4. 38	·1083	10. 16:	·02282	22. 0	63 ·1	65 ·2
	***	10. 26	·1080	16. 45	·02270			
2. 20	6. 50	15. 55	·1084	23. 59	·02443			
3. 15:	21. 3. 10	18. 46:	·1082					
8. 0:	20. 59. 0	21. 25	·1063					
12. 0	21. 0. 30	23. 4	·1065					
17. 30	21. 1. 0		(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 5								
h m	° ′ ″	h m		h m		h m	°	°
20. 30:	20. 59. 0							
23. 0	21. 4. 45							
	(†)							
Oct. 6		Oct. 6		Oct. 6		Oct. 6		
0. 0	21. 3. 55	0. 0	·1037	0. 0	·02443	6. 38	64 ·4	66 ·2
0. 40	5. 10	0. 41	·1032	2. 15	·02459	21. 0	63 ·0	64 ·3
1. 45	9. 20	1. 45	·1084	9. 31	·02378			
2. 20	8. 40		(†)	16. 45	·02473			
	(†)	6. 0	·1018		(†)			
6. 25	8. 30	12. 28	·1017	20. 43	·02608			
12. 15	7. 40	12. 52	·1008	21. 50	·02646			
12. 45	8. 45	12. 59	·1011	23. 59	·02643			
13. 18	6. 35	13. 12	·1007					
17. 43	6. 20	13. 32	·1020					
21. 14	0. 0	16. 4	·1013					
22. 10	1. 35	22. 15	·1035					
22. 43	3. 30		(†)					
	(†)							
Oct. 7		Oct. 7		Oct. 7		Oct. 7		
	(†)		(†)	0. 0	·02643	1. 0	65 ·2	65 ·8
1. 0	21. 9. 30	0. 25	·1073	2. 6	·02582	3. 0	67 ·6	68 ·4
2. 12	7. 0	0. 46	·1078	5. 17	·02210	9. 0	68 ·5	69 ·0
2. 35	7. 15	1. 35	·1073	7. 8	·02092	21. 0	62 ·5	64 ·7
	***		***		·02130			
4. 30:	2. 30	3. 7	·1080	9. 33	·02205			
9. 5	21. 1. 0	3. 36	·1074	13. 50	·02263			
9. 25	20. 53. 35		***	20. 29	·02679			
9. 55	59. 0	5. 56	·1078	22. 13	·02750			
	***		***	23. 59	·02743			
11. 50	58. 5	7. 17	·1075					
13. 3	20. 57. 30		***					
13. 42	21. 2. 35	8. 28	·1081					
			***					
14. 0	20. 53. 40	9. 16	·1070					
14. 45	20. 57. 0	9. 40	·1083					
15. 30	21. 0. 5	10. 18	·1077					
17. 10	21. 1. 0		***					
17. 28	20. 59. 0	11. 24	·1083					
18. 23	20. 59. 15	12. 16	·1081					
19. 15	21. 2. 30	12. 40	·1073					
19. 45	20. 59. 0	13. 21	·1092					
	***	14. 17	·1074					
21. 0	20. 59. 15	16. 32	·1085					
23. 0:	21. 9. 0	17. 43	·1085					
23. 10	9. 10	18. 0	·1082					
	(†)	18. 35	·1086					
		19. 41	·1082					
			***					
		21. 30	·1064					
			***					
		22. 56	·1065					
			(†)					
Oct. 8		Oct. 8		Oct. 8		Oct. 8		
	(†)		(†)	0. 0	·02743	1. 0	66 ·2	66 ·8
0. 55	21. 8. 45	1. 0	·1066*	1. 0	·02704*	3. 0	67 ·8	70 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Oct. 8		Oct. 8		Oct. 8		Oct. 8		
h m	° ′ ″	h m		h m		h m	°	°
1. 45	21. 6. 0	3. 0	·1076*	3. 0	·02554*	9. 0	69·0	71·0
2. 21	6. 50	3. 30	·1070	9. 0	·02404*	20. 0	64·5	67·0
2. 44	5. 30		***	21. 0	·02864*	21. 0	64·8	66·5
3. 11	6. 30	4. 35	·1079			22. 0	64·8	66·5
3. 30:	3. 30	4. 48	·1077			23. 0	65·0	66·5
5. 45	1. 50	5. 45	·1084					
7. 24	21. 2. 30	6. 6	·1079					
8. 0	20. 58. 30	6. 27	·1085					
9. 30:	21. 1. 0	6. 51	·1070					
12. 15	21. 0. 0	7. 47	·1080					
12. 41	20. 58. 35	8. 26	·1072					
13. 20	21. 0. 10		***					
14. 35	20. 57. 45	11. 10	·1081					
15. 30	21. 0. 25		***					
18. 55	21. 1. 0	12. 9	·1077					
20. 30:	20. 59. 35		***					
23. 40	21. 4. 30	13. 52	·1084					
	(†)		***					
		15. 17	·1080					
		16. 37	·1085					
		18. 46	·1086					
		21. 58	·1071					
		23. 17	·1073					
			(†)					
Oct. 9		Oct. 9		Oct. 9		Oct. 9		
1. 0	21. 5. 44*	1. 0	·1074*	1. 0	·02854*	0. 0	65·3	67·0
3. 0	3. 57*	3. 0	·1078*	3. 0	·02724*	1. 0	66·2	67·1
9. 0	21. 0. 14*	9. 0	·1085*	9. 0	·02544*	2. 0	67·3	68·4
21. 0	20. 58. 55*	21. 0	·1101*	21. 0	·03544*	3. 0	67·8	69·0
						4. 0	67·6	69·3
						6. 0	67·0	68·0
						9. 0	66·2	67·3
						12. 0	63·6	64·0
						18. 0	59·2	61·4
						20. 0	59·0	60·5
						21. 0	58·3	60·2
						22. 0	59·0	60·5
						23. 0	59·0	61·2
Oct. 10		Oct. 10		Oct. 10		Oct. 10		
1. 0	21. 22. 43*	1. 0	·1055*		(†)	0. 0	60·2	61·5
3. 0	21. 13. 15*	3. 0	·1071*	0. 33	·03551	1. 0	61·2	62·3
9. 0	20. 38. 21*	9. 0	·1089*	1. 18	·03550	2. 0	62·8	64·2
21. 0	20 59. 37*	21. 0	·1046*	5. 47	·03103	3. 0	64·0	65·8
				6. 34	·03130	4. 0	66·0	66·5
				7. 17	·02983	9. 0	65·5	67·0
				7. 36	·03027	21. 0	65·2	66·0
				9. 40	·02790			
				10. 28	·02743			
				11. 25:	·02613			
				12. 6	·02710			
				12. 34	·02453			
					***			
				13. 17	·02568			
				14. 5	·02480			
					***			
				15. 5	·02663			
					***			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
h m	° ′ ″	h m				h m	°	°
				Oct. 10				
				h m				
				17. 16	·02762			
				18. 17	·02863			
				21. 26	·02950			
					(†)			
				23. 0	·02848			
				23. 59	·02890			
Oct. 11		Oct. 11		Oct. 11		Oct. 11		
	(†)		(†)	0. 0	·02890	1. 0	66·2	67·0
1. 0	21. 9. 16*	1. 0	·1055*	1. 7	·02887	3. 0	67·3	69·0
2. 45	1. 20	3. 0	·1055*		***	9. 0	63·5	65·2
	***	4. 42	·1089	4. 18	·02671	21. 0	56·8	58·3
4. 8	21. 5. 0		***	4. 32	·02722			
4. 24	20. 43. 35	5. 4	·1081	5. 19	·02590			
5. 20	21. 2. 0	5. 33	·1058	6. 26	·02553			
	***	6. 4	·1069	6. 46	·02571			
5. 47	20. 59. 0	6. 32	·1054	7. 19	·02530			
6. 16	21. 0. 30	6. 47	·1110	10. 41	·02595			
6. 33	20. 44. 0	7. 18	·1072	15. 35	·03030			
6. 45	48. 0	7. 37	·1083	20. 45	{ ·03513			
7. 10	59. 55	8. 3	·1072		{ ·03460			
7. 38	20. 56. 0	9. 6	·1068	23. 59	·03362			
8. 0	21. 1. 0	9. 34	·1085					
	***	9. 47	·1079					
8. 40	20. 59. 0	10. 12	·1088					
9. 20	20. 59. 25	10. 27	·1083					
9. 40	21. 3. 30	10. 40	·1095					
	***	10. 57	·1083					
10. 25	21. 1. 30		***					
10. 40	20. 57. 0	12. 43	·1081					
11. 0	21. 1. 10	12. 50	·1071					
	***		***					
12. 32	20. 56. 0	13. 45	·1084					
13. 3	21. 3. 0	14. 6	·1079					
	***							
14. 5	2. 0	14. 33	·1086					
14. 30	4. 0	14. 46	·1084					
15. 0	4. 0	15. 10	·1093					
15. 30	21. 0. 30		***					
	***	16. 34	·1086					
16. 36	20. 59. 0		***					
	***	17. 46	·1095					
18. 0	21. 4. 0		***					
18. 17	2. 0	18. 48	·1080					
18. 45	5. 0		***					
19. 13	9. 30	20. 2	·1092					
19. 51	3. 30	20. 13	·1085					
	***	20. 20	·1090					
21. 55	4. 0	20. 57	·1076					
22. 22	6. 30	21. 15	·1080					
22. 55	6. 0		***					
23. 59	8. 10	21. 43	·1065					
			***					
		22. 5	·1076					
			***					
		22. 20	·1066					
			***					
		22. 48	·1071					
			(†)					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 12		Oct. 12		Oct. 12		Oct. 12		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 8. 10		(†)	0. 0	·03362	1. 0	59·8	60·2
0. 30	7. 0	1. 0	·1066*	0. 38	·03362	3. 0	62·0	62·0
	***	1. 12	·1070	3. 20	·03165	9. 0	63·5	64·3
2. 0	8. 10		***	3. 45	·03165	22. 20	61·5	62·5
	***	2. 17	·1069	4. 48	·03026			
3. 0	5. 0	2. 35	·1062	8. 27	·02750			
3. 20	21. 2. 10	3. 0	·1077	13. 45	·02592			
3. 45	20. 51. 30	3. 15	·1042	22. 18	·02736			
4. 45	21. 3. 0	4. 3	·1083	23. 59	·02657			
	***		***					
6. 13	21. 3. 0	4. 46	·1072					
6. 40	20. 58. 0	5. 25	·1080					
7. 8	21. 1. 0	6. 36	·1066					
7. 25	20. 55. 35	7. 17	·1071					
7. 32	57. 0	7. 46	·1096					
7. 42	56. 20	8. 38	·1080					
7. 55	59. 30	8. 56	·1087					
8. 23	59. 40	9. 23	·1081					
8. 43	20. 58. 0		***					
10. 25	21. 0. 0	10. 15	·1087					
11. 0	20. 59. 0		***					
11. 40	21. 0. 20	11. 13	·1081					
12. 8	20. 59. 0	11. 34	·1087					
13. 5	21. 4. 0		***					
13. 28	21. 0. 45	12. 37	·1084					
14. 25	20. 59. 0	13. 8	·1096					
16. 57	21. 5. 15		***					
17. 20	4. 0	15. 5	·1077					
18. 0:	5. 30	16. 0	·1077					
19. 15	21. 5. 0	17. 39	·1091					
	***		***					
20. 35	20. 58. 30	19. 26	·1088					
			***					
20. 55	21. 3. 30	20. 25	·1068					
21. 8	0. 0		***					
21. 14	3. 30	20. 46	·1075					
21. 25	21. 0. 0	20. 52	·1065					
	***	21. 4	·1074					
21. 53	20. 58. 10	21. 16	·1062					
	***		***					
22. 15	21. 3. 30	21. 57	·1064					
22. 52	3. 0		***					
23. 40	5. 0	22. 48	·1057					
23. 59	3. 30		(†)					
Oct. 13		Oct. 13		Oct. 13		Oct. 13		
0. 0	21. 3. 30		(†)	0. 0	·02657	6. 0	65·0	66·0
2. 5	21. 7. 0	1. 37	·1048	3. 42	·02503	21. 0	64·0	66·0
	***		***	5. 45	{·02347			
3. 17	20. 59. 0	3. 46	·1074		{·02398			
3. 28	21. 0. 5	4. 5	·1066	6. 56	·02410			
	***	4. 46	·1073	9. 3	·02483			
5. 15	21. 1. 20	5. 2	·1068	9. 17	·02445			
5. 58	20. 58. 0	5. 17	·1074	11. 6	·02496			
6. 14	45. 20	5. 36	·1069	13. 25	·02483			
6. 43	58. 0	5. 45	·1077	17. 34	·02590			
6. 55	20. 54. 50	6. 10	·1067	22. 5	·02582			
7. 20	21. 0. 0	6. 25	·1115	23. 59	·02470			

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Oct. 13		Oct. 13						
h m	° ′ ″	h m		h m		h m	°	°
7. 38	20. 57. 0	6. 51	·1080					
8. 0	56. 20	7. 13	·1086					
8. 15	58. 0	7. 36	·1073					
8. 41	49. 20	7. 45	·1078					
8. 57	59. 0	7. 59	·1078					
9. 40	52. 30	8. 13	·1086					
10. 25	57. 0	8. 28	·1077					
	***	8. 47	·1114					
11. 25	57. 30	9. 10	·1083					
11. 42	55. 0	9. 30	·1077					
11. 55	20. 55. 0	9. 45	·1085					
12. 13	21. 0. 0	10. 38:	·1077					
12. 50	20. 54. 0	11. 43	·1087					
13. 45	20. 52. 40	12. 10	·1066					
14. 30	21. 0. 30	13. 3	·1095					
15. 15	20. 59. 0	13. 45	·1072					
16. 25	21. 3. 35		***					
16. 58	21. 1. 0	14. 47	·1080					
18. 0	20. 59. 40	15. 36	·1080					
19. 45	20. 58. 10	16. 9	·1071					
21. 43	21. 0. 5	17. 56:	·1088					
22. 0	2. 0		***					
22. 10	1. 0	20. 35	·1073					
	***		***					
23. 59	10. 0	21. 50	·1067					
		22. 10	·1059					
		22. 19	·1064					
			***					
		23. 27	·1057					
		23. 45	·1061					
		23. 59	·1053					
Oct. 14		Oct. 14		Oct. 14		Oct. 14		
0. 0	21. 9. 50	0. 0	·1053	0. 0	·02470	1. 0	66·8	68·2
0. 30	9. 30		***	1. 46	·02662	3. 0	69·0	70·2
1. 0	6. 35	0. 56	·1047	2. 12	·02645	9. 0	69·2	70·7
2. 20:	7. 5		***		***	21. 0	60·6	63·2
5. 29	0. 0	1. 50	·1061	3. 36	·02745			
6. 13	1. 30		***	3. 50	·02702			
6. 25	0. 0	5. 8	·1072	4. 16	·02780			
6. 42	21. 0. 0	6. 10	·1068	4. 36	·02753			
7. 51	20. 54. 30	7. 5	·1051		***			
7. 15	54. 30		***	8. 15	·03078			
7. 25	52. 30	7. 44	·1062	9. 46:	·02990			
7. 45	56. 0	8. 6	·1054	13. 35	·03072			
8. 10	56. 0		***	17. 7	·03296			
8. 47:	58. 10	8. 45	·1065	22. 34	·03725			
9. 30	50. 0		***	23. 59	·03790			
9. 45	47. 30	9. 27	·1055					
10. 15	53. 0	9. 40	·1067					
10. 25	52. 0	10. 0	·1070					
10. 53	56. 40	10. 19	·1063					
12. 5	59. 0	10. 45	·1073					
13. 8	20. 58. 50		***					
14. 40	21. 1. 0	12. 6	·1073					
15. 15:	20. 58. 5		***					
	***	13. 17	·1081					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

October 9 and 10. The Photographic Traces of the Declination and Horizontal Force Magnets were too faint for use.

Greenwich Mean Solar Time.	Western Declination.
Oct. 14	
h m	° ′ ″
16. 45	21. 2. 20
17. 45	1. 0
18. 14	2. 10
	***
19. 50	1. 0
	***
20. 55	3. 0
21. 22	1. 0
22. 15	1. 30
23. 45	7. 35
23. 59	7. 5
Oct. 15	
0. 0	21. 7. 5
1. 29	6. 40
1. 47	8. 0
	***
4. 50	21. 2. 0
5. 21	20. 57. 15
6. 6	59. 35
	***
9. 18	59. 20
9. 47	55. 25
10. 25	57. 5
10. 53	56. 0
11. 15	57. 0
11. 50:	20. 56. 0
12. 45	21. 0. 5
14. 10	1. 0
15. 0	0. 20
16. 23	2. 5
17. 11	21. 0. 30
17. 40:	21. 0. 50
	***
20. 41	20. 56. 0
22. 8	21. 1. 0
22. 30	0. 20
	***
23. 59	7. 10
Oct. 16	
0. 0	21. 7. 10
1. 0	10. 0
2. 8	10. 0
4. 30:	3. 0
7. 22	0. 35
9. 45	21. 0. 50
10. 17	20. 59. 0
11. 20	21. 2. 30
12. 0	20. 58. 0
13. 50	21. 6. 0
14. 15	2. 5
	***
18. 40	21. 1. 5
19. 45	20. 59. 10
20. 38	56. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 14	
h m	
14. 6	·1078
	***
16. 45	·1085
17. 10	·1080
	***
18. 40	·1093
	***
19. 43	·1078
	***
21. 53	·1077
	***
23. 5	·1070
	***
23. 59	·1075
Oct. 15	
0. 0	·1075
1. 34	·1074
2. 16	·1067
	***
5. 5	·1065
5. 28	·1075
	***
9. 13	·1081
9. 46	·1095
9. 58	·1088
10. 20	·1097
	***
12. 3	·1082
16. 13	·1089
17. 4	·1096
17. 42	·1094
18. 45	·1096
20. 36	·1080
21. 18	·1080
22. 3	·1074
22. 26	·1066
22. 45	·1070
23. 59	·1069
Oct. 16	
0. 0	·1069
	***
2. 6	·1083
2. 27	·1076
4. 0	·1089
4. 46	·1085
6. 5	·1089
	***
8. 53	·1087
	***
11. 15	·1091
11. 46:	·1103
12. 45	·1088
13. 10	·1088
13. 48:	·1095

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Oct. 15	
h m	
0. 0	·03790
1. 31	·03853
3. 6	·03730
6. 7	·03322
8. 27:	·03180
19. 43	·03695
23. 59	·03770
Oct. 16	
0. 0	·03770
2. 7	·03835
8. 36	·03710
12. 37	·03742
17. 45	·03963
20. 7	·04092
22. 36	·03823
23. 59	·03790

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
1. 0	61 ·6	64 ·2
3. 0	64 ·8	67 ·0
9. 0	63 ·5	66 ·7
20. 0	60 ·0	62 ·0
21. 0	60 ·0	62 ·0
22. 0	60 ·1	62 ·2
23. 0	60 ·2	62 ·2
0. 0	60 ·3	62 ·0
1. 0	61 ·0	62 ·6
2. 0	61 ·0	62 ·7
3. 0	61 ·2	63 ·0
6. 0	61 ·0	63 ·2
9. 0	60 ·0	62 ·0
12. 0	57 ·8	59 ·7
18. 0	54 ·0	57 ·2
20. 0	54 ·0	57 ·0
21. 0	53 ·7	56 ·2
22. 0	54 ·0	56 ·3
23. 0	54 ·3	56 ·6

Greenwich Mean Solar Time.	Western Declination.
Oct. 16	
h m	° ′ ″
22. 14	20. 59. 30
23. 40	21. 6. 20
23. 59	7. 0
Oct. 17	
0. 0	21. 7. 0
1. 0:	7. 45
4. 50	21. 0. 10
6. 51	20. 59. 5
7. 26	56. 20
8. 10	59. 30
11. 0	20. 59. 0
11. 50	21. 0. 50
14. 15	1. 30
14. 49	0. 0
15. 45	0. 5
16. 31	3. 35
16. 52	7. 10
17. 35	1. 30
18. 15	21. 0. 0
19. 38	20. 59. 30
	***
20. 30:	21. 0. 10
21. 45:	20. 59. 30
	***
23. 7	21. 7. 0
	***
23. 59	7. 5
Oct. 18	
0. 0	21. 7. 15
1. 40	10. 10
2. 30	7. 0
5. 0:	2. 20
8. 0	21. 0. 35
8. 15	20. 59. 0
8. 30	59. 40
8. 46	56. 30
9. 15	20. 58. 15
9. 45	21. 2. 20
10. 25	20. 57. 5
10. 44	20. 57. 10
11. 45:	21. 0. 0
	***
15. 20	1. 35
	***
17. 40	0. 25
18. 3	2. 0
18. 40	21. 2. 0
19. 15	20. 59. 50
21. 25	20. 58. 0
22. 55	21. 5. 0
23. 59	8. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 16	
h m	
14. 30	·1092
	***
17. 39	·1099
18. 50	·1097
21. 45	·1079
22. 58:	·1076
23. 59	·1081
Oct. 17	
0. 0	·1081
3. 17	·1078
6. 6	·1084
7. 12	·1092
8. 45	·1091
	***
9. 47	·1096
	***
14. 46	·1099
	***
16. 45	·1104
17. 16	·1114
17. 47	·1105
18. 37	·1107
21. 45	·1081
22. 10	·1085
	***
22. 47	·1079
23. 10	·1083
23. 42	·1081
	(†)
Oct. 18	
	(†)
0. 45	·1089
	***
2. 6	·1067
	***
3. 53	·1079
	***
7. 36	·1090
	***
9. 20	·1090
9. 47:	·1097
10. 16	·1090
	***
11. 34	·1099
12. 4	·1096
12. 40	·1100
13. 7	·1098
	***
17. 2	·1107
	***
19. 18	·1103
21. 27	·1085
22. 46	·1080
23. 59	·1086

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Oct. 17	
h m	
0. 0	·03790
2. 7	·03732
8. 26	·03276
10. 17:	·03244
13. 43	·03283
22. 0	·03576
23. 59	·03568
Oct. 18	
0. 0	·03568
2. 5	·03490
4. 45	·03193
7. 50	·03002
10. 12:	·02975
12. 52	·03086
22. 17	·03672
23. 59	·03715

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. E. Magnet.
h m	°	°
0. 0	55 ·6	57 ·2
1. 0	56 ·5	58 ·1
2. 0	57 ·7	59 ·0
3. 0	58 ·4	59 ·8
4. 0	59 ·0	60 ·0
9. 0	59 ·0	62 ·0
21. 0	55 ·1	57 ·7
1. 0	58 ·0	59 ·2
3. 0	60 ·4	61 ·2
9. 0	59 ·5	61 ·2
21. 0	52 ·0	55 ·2

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 19		Oct. 19		Oct. 19		Oct. 19		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 8. 0	0. 0	·1086	0. 0	·03715	1. 0	55·8	57·6
	***		***	1. 5	·03710	3. 0	59·0	60·8
1. 0:	8. 35	2. 7	·1077	4. 16	·03273	9. 0	59·7	61·4
2. 24	7. 0		***	7. 15	·02988	22. 5	54·2	57·0
3. 15:	21. 3. 20	6. 15	·1092	9. 56:	·02910			
6. 53	20. 58. 35	11. 35	·1100	13. 20	·02975			
12. 5	21. 1. 0	11. 45	·1106	20. 45	·03330			
15. 15	1. 55	12. 28	·1104	23. 59	·03355			
15. 47	1. 0		***					
16. 20	21. 2. 0	18. 7:	·1115					
18. 30:	20. 59. 30		***					
19. 50	21. 1. 0	19. 24	·1102					
20. 10	20. 58. 40	19. 53	·1105					
20. 45	20. 59. 0		***					
23. 0	21. 7. 0	21. 0	·1097					
23. 59	7. 45	21. 16	·1099					
			***					
		22. 45	·1083					
		23. 5	·1087					
			(†)					
Oct. 20		Oct. 20		Oct. 20		Oct. 20		
0. 0	21. 8. 0		(†)	0. 0	·03355	9. 0	60·0	62·0
0. 9	9. 0	0. 29	·1089	1. 17	·03368	21. 0	56·2	58·5
0. 15	7. 30	1. 3	·1084	4. 6	·03248			
0. 45	7. 30	1. 42	·1093	8. 36	·02976			
1. 30	10. 0	2. 0	·1082	12. 37:	·02890			
1. 45	7. 10	2. 14	·1092	13. 55	·02900			
2. 0	12. 20	4. 0	·1089	20. 35	·03132			
	***	4. 43	·1096	23. 59	·03204			
2. 55	11. 35	6. 38	·1099					
3. 51	8. 5	7. 54	·1105					
4. 14	8. 0	10. 48	·1096					
5. 15:	3. 30	11. 11	·1099					
6. 15	21. 1. 10	11. 26	·1092					
10. 8	20. 59. 50	11. 42	·1095					
10. 18	57. 40	11. 57	·1092					
10. 30	58. 10	12. 27	·1104					
10. 51	56. 45	13. 13	·1096					
11. 20	58. 0	18. 57	·1101					
11. 35	56. 20	21. 8	·1085					
13. 6	20. 59. 0		(†)					
13. 40	21. 5. 30							
14. 30:	1. 5							
18. 40:	21. 1. 15							
20. 43	20. 57. 20							
23. 59	21. 6. 0							
Oct. 21		Oct. 21		Oct. 21		Oct. 21		
0. 0	21. 6. 5	0. 0	·1076	0. 0	·03204	1. 0	59·0	60·0
	(†)	2. 36	·1089	3. 0	·02947	3. 0	60·3	61·2
1. 0	8. 3*		***	11. 7	·02843	9. 0	62·2	62·5
2. 0	6. 10	5. 41	·1095	15. 0:	·02830	21. 0	60·0	60·7
5. 30	1. 5	7. 8	·1098	21. 17	·02978			
8. 50	21. 0. 0	10. 22	·1097	23. 59	·02970			
9. 20	20. 58. 35	10. 43	·1100					
9. 44	59. 0	11. 45	·1084					
10. 40	55. 35	12. 7	·1089					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 21		Oct. 21				Oct. 22		
h m	° ′ ″	h m		h m		h m	°	°
11. 20	20. 55. 30	13. 11	·1093			0. 0	61·7	62·1
13. 50	21. 1. 10	14. 3	·1091			3. 0	62·5	63·8
14. 30	20. 59. 0	14. 50	·1095			9. 0	59·8	61·2
16. 0	21. 1. 30	16. 7	·1093			20. 0	55·0	56·5
18. 20:	21. 1. 30	17. 15	·1099			21. 0	54·7	56·2
20. 20:	20. 57. 50	18. 46	·1101			22. 0	55·0	56·3
21. 41	21. 0. 40		***			23. 0	55·8	57·0
21. 55	0. 0	22. 35	·1073					
23. 15	6. 35	22. 47	·1076					
23. 59	6. 45		***					
		23. 42	·1073					
		23. 59	·1075					
Oct. 22		Oct. 22		Oct. 22		Oct. 22		
0. 0	21. 6. 45	0. 0	·1075	0. 0	·02970			
0. 30	7. 50	0. 53	·1088	2. 17	·02866			
1. 2	9. 55	1. 36	·1081	5. 2	·02743			
1. 42	6. 0	2. 13	·1088	6. 15	·02733			
	***		***		(†)			
5. 0	2. 35	5. 17	·1089	8. 45	·02796			
	(†)		***	10. 43	·02930			
8. 40	0. 30	6. 36	·1082	14. 15	·03062			
9. 39	1. 30	6. 53	·1087	19. 0	·03366			
	***		(†)	23. 59	·03476			
14. 5	1. 35	9. 0	·1092					
17. 35	0. 5	9. 33	·1092					
18. 5	1. 0		***					
18. 35	0. 0	13. 2	·1099					
19. 15:	21. 0. 5		***					
	***	15. 37	·1105					
21. 25	20. 58. 0		***					
23. 10	21. 5. 20	16. 26	·1111					
	(†)		***					
		17. 42	·1109					
		18. 27	·1105					
		18. 55	·1109					
			***					
		21. 58	·1089					
			***					
		23. 16	·1087					
			(†)					
Oct. 23		Oct. 23		Oct. 23		Oct. 23		
	(†)		(†)	0. 0	·03476	0. 0	56·0	57·3
1. 18	21. 5. 40	1. 0	·1079*	1. 18	·03472	1. 0	56·8	58·0
1. 45	6. 30	1. 7	·1079	4. 4	·03195	2. 0	57·8	59·0
4. 30:	21. 1. 35		***	7. 5	·03025	3. 0	58·5	60·2
6. 44	20. 59. 0	8. 10	·1103	9. 22:	·02983	4. 0	59·0	60·0
8. 45	21. 1. 0		***	20. 6	·03076	6. 0	59·5	61·0
11. 0	20. 59. 0	12. 2	·1102	22. 22	·03044	9. 0	58·0	59·5
14. 30	21. 1. 5		***	23. 59	·03067	12. 0	57·5	59·0
16. 25	20. 58. 35	15. 5	·1108			18. 0	56·8	58·6
16. 55	59. 50	16. 31	·1107			20. 0	57·5	60·0
18. 0	58. 20	17. 52	·1111			21. 0	57·6	59·7
19. 32	58. 30	19. 17	·1106			22. 0	58·3	60·0
19. 48	55. 10	19. 21	·1100			23. 0	59·1	60·2
20. 15:	20. 59. 15	19. 33	·1109					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 23		Oct. 23						
h m	° ′ ″	h m		h m		h m	°	°
20. 44	21. 0. 0	20. 25	·1091					
21. 35	4. 0	20. 43	·1091					
22. 13	10. 0	21. 23	·1063					
	***		***					
22. 54	9. 45	22. 56	·1077					
	***		***					
23. 31	13. 0	23. 20	·1070					
23. 50	11. 5	23. 45	·1084					
23. 59	13. 0	23. 49	·1079					
		23. 59	·1083					
Oct. 24		Oct. 24		Oct. 24		Oct. 24		
0. 0	21. 13. 0	0. 0	·1084	0. 0	·03067	0. 0	59 ·8	60 ·2
0. 7	18. 10	0. 5	·1087	1. 36	·03070	1. 0	60 ·2	60 ·3
0. 16	14. 30		(†)		***	2. 0	60 ·9	61 ·2
0. 24	18. 0	0. 55	·1087	2. 51	·03092	3. 0	61 ·2	61 ·8
0. 31	14. 10	1. 28	·1071	4. 6	·03002	4. 0	62 ·0	62 ·5
0. 55	17. 0	2. 6	·1082	4. 45	·02983	9. 0	62 ·3	63 ·7
1. 25	11. 30	2. 42	·1060	6. 15	{·02843	21. 0	61 ·3	62 ·9
1. 45	14. 0	2. 48	·1079		{·02937			
1. 50	12. 30	3. 7	·1056	8. 26	·03048			
2. 2	15. 10	3. 16	·1069		***			
2. 14	15. 0	3. 26	·1061	11. 19	·03033			
2. 26	16. 35	3. 45	·1073	12. 7	·02983			
2. 39	14. 40	4. 16	·1053	12. 50	·02907			
2. 50	7. 35	4. 45	·1063	13. 34	·02958			
2. 56	11. 10	5. 10	·1044		***			
3. 8	6. 15	5. 45	·1063	15. 6	·02957			
3. 21	14. 0	6. 40	·1084	16. 4	·02906			
3. 35	11. 20	6. 50	·1079		***			
4. 6	17. 30	7. 7	·1086	17. 30	·02918			
4. 40	12. 0	7. 15	·1079	18. 45	·03002			
4. 48	13. 35	7. 34	·1076	21. 36:	·03070			
5. 0	12. 0	8. 11	·1043	23. 59	·03022			
5. 20	7. 0		***					
	***	8. 40	·1055					
			***					
7. 0	0. 5							
7. 45	21. 1. 0	9. 3	·1049					
8. 18	20. 47. 25	9. 15	·1056					
8. 45	41. 20	9. 28	·1043					
9. 30	51. 35	9. 47	·1053					
9. 45	49. 0	10. 6	·1053					
10. 0	50. 45	10. 23	·1065					
10. 16	49. 0		***					
10. 30	53. 0	11. 7	·1065					
	***		***					
11. 15	50. 0	11. 46	·1077					
11. 35	53. 25	12. 8	·1068					
12. 0	58. 0	12. 20	·1082					
12. 9	20. 56. 30		***					
12. 35	21. 10. 0	13. 4	·1061					
12. 40	20. 53. 15	13. 26	·1078					
13. 0	59. 0		***					
13. 25	53. 0	13. 56	·1062					
13. 40	56. 10	14. 10	·1077					
14. 14	47. 25	14. 20	·1066					
14. 35	52. 0	14. 45	·1082					
14. 50	54. 0	14. 49	·1076					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 24		Oct. 24						
h m	° ′ ″	h m		h m		h m	°	°
15. 1	20. 51. 10	15. 13	·1111					
15. 20	20. 52. 0		***					
16. 0	21. 7. 5	15. 45	·1121					
16. 13	9. 50	16. 8	·1094					
16. 33	5. 0	16. 18	·1095					
17. 8	1. 0	16. 35	·1073					
	***	16. 46	·1090					
18. 3	4. 50	16. 55	·1064					
18. 15	10. 45	17. 6	·1073					
19. 0	21. 0. 0		***					
19. 35	20. 57. 30	18. 40	·1050					
	***	19. 7	·1089					
20. 32	20. 58. 30	19. 35	1073					
	***		**					
23. 45	21. 6. 25	22. 15	·1053					
	(†)		***					
		23. 59	·1050					
Oct. 25		Oct. 25		Oct. 25		Oct. 25		
	(†)	0. 0	·1050	0. 0	·03022	1. 0	62· 3	63 ·9
0. 45	21. 6. 30		***	1. 15	·03006	3. 0	63 ·8	65 ·5
3. 30	1. 35	0. 17	·1048		(†)	9. 0	63 ·8	65 ·8
	***		(†)	3. 0	·03105	21. 0	58 ·8	60 ·9
4. 50	4. 0	1. 0	·1050*	3. 46	·03363			
5. 25	1. 0	3. 0	·1064*	6. 48	{·03568			
5. 50	3. 0	3. 6	·1068		{·03670			
6. 45	3. 0		***	10. 26	·03563			
7. 0	4. 0	3. 36	·1064	11. 40	·03550			
8. 0	0. 0	3. 55	·1076	15. 22	·03617			
8. 31	21. 0. 55	4. 7	·1070	18. 36	·03750			
9. 0	20. 53. 0	4. 36	·1073	23. 59	·04021			
9. 50	54. 0		***					
10. 20	48. 25	5. 25	·1062					
10. 35	50. 40	5. 46	·1068					
	***	6. 35	·1060					
11. 15	50. 10	7. 13	·1069					
11. 30	20. 47. 0	7. 32	·1060					
12. 35	21. 1. 5	7. 45	·1060					
13. 30:	20. 58. 30	7. 57	·1048					
14. 25	21. 3. 0		***					
15. 16	21. 1. 20	8. 40	·1042					
15. 39	20. 58. 40	9. 26	·1056					
15. 50	21. 1. 0	9. 58	·1054					
16. 18	0. 30	10. 29	·1062					
17. 6	6. 0	10. 48	·1051					
17. 30	13. 25		***					
18. 10	11. 20	11. 15	·1051					
18. 52	3. 10	11. 30	·1062					
19. 15	6. 30		***					
	***	12. 3	·1062					
19. 40	5. 30	12. 46	·1073					
20. 6	7. 15	14. 37	·1074					
20. 20	6. 30	15. 43	·1085					
20. 30	8. 25	15. 47	·1082					
20. 55	5. 30	16. 7	·1088					
21. 0	6. 20		***					
21. 42	2. 20	17. 47	·1080					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 25		Oct. 25						
h m	° ′ ″	h m		h m		h m	°	°
21. 51	21. 3. 30	19. 0	·1088					
22. 0	2. 55	19. 42	·1066					
22. 45	4. 30		***					
	(†)	21. 17	·1087					
		21. 55	·1075					
			***					
		23. 0	·1075					
		23. 59	·1068					
Oct. 26		Oct. 26		Oct. 26		Oct. 26		
0. 0	21. 4. 30	0. 0	·1068	0. 0	·04021	1. 0	59 ·3	60 ·7
1. 28	5. 25		***	0. 56	·04073	3. 0	60 ·8	61 ·7
1. 53	8. 30	1. 28	·1070	2. 45	·04040	9. 0	58 ·5	61 ·0
2. 30	5. 30	1. 55	·1064	4. 34	·03892	22. 0	52 ·0	54 ·2
2. 46	7. 30		***	7. 17	·03830			
	***	6. 18	·1085	7. 55	·03866			
3. 45	3. 50	6. 46	·1091	8. 13	·03839			
4. 14	5. 30	7. 8	·1085	14. 45	·04043			
6. 0:	1. 40	7. 46	·1060	18. 33	·04329			
7. 40	21. 1. 30	8. 5	·1105		(†)			
8. 11	20. 56. 30	8. 16	·1085	22. 0	·04350			
8. 23	42. 20	8. 35	·1077					
8. 46	54. 0	8. 46	·1081					
8. 55	52. 30	9. 0	·1076					
9. 3	54. 0		***					
9. 14	53. 5	10. 6	·1089					
9. 25	20. 57. 0		***					
	(†)	14. 0	·1086					
12. 30	21. 0. 10		***					
13. 40	1. 0	17. 16	·1100					
14. 27	7. 10		***					
15. 6	2. 15	21. 6	·1096					
	***		***					
17. 0:	0. 10	23. 0	·1095					
	***	23. 23	·1084					
19. 30	3. 35	23. 59	·1085					
	***							
20. 45	21. 1. 0							
21. 15	20. 59. 20							
23. 0	21. 4. 30							
	(†)							
Oct. 27		Oct. 27		Oct. 27		Oct. 27		
	(†)	0. 0	·1085	0. 0	·04243	8. 0	56 ·0	58 ·5
0. 15	21. 7. 0		***	1. 25	·04220	21. 0	51 ·8	54 ·7
3. 0	4. 45	3. 35	·1093	6. 50	·03842			
3. 50	2. 0		***	9. 17	·03770			
9. 24	0. 15	6. 13	·1100	11. 0:	·03770			
13. 14	0. 0		***	17. 3	·03869			
13. 18	21. 2. 15	10. 36	·1098	19. 17	·03896			
13. 40	20. 57. 10		***	21. 48	{·03982			
14. 0	58. 30	12. 48	·1100		·04077			
14. 45:	57. 30	13. 5	·1124	23. 59	·04080			
15. 15	21. 0. 0	13. 16	·1097					
15. 32	20. 57. 0	13. 34	·1102					
15. 50	59. 20	13. 43	·1093					
	***		***					
16. 50	20. 59. 0	14. 42	·1093					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 27		Oct. 27						
h m	° ′ ″	h m		h m		h m	°	°
17. 12	21. 2. 20	15. 43	·1101					
18. 0	21. 1. 40	16. 10	·1094					
18. 47	20. 59. 0		***					
19. 16	21. 2. 0	17. 57	·1111					
20. 0	0. 10	18. 28	·1111					
	***	18. 46	·1119					
20. 54	6. 5		***					
21. 58	1. 0	20. 17	1 ·1100					
22. 30	3. 0		***					
23. 30	5. 5	21. 35	·1110					
23. 59	5. 0		***					
		22. 23	·1106					
			(†)					
Oct. 28		Oct. 28		Oct. 28		Oct. 28		
0. 0	21. 5. 5		(†)	0. 0	·04080	1. 0	54 ·0	55 ·8
	(†)	1. 0	·1091*	2. 7	·04042	3. 0	56 ·0	58 ·6
1. 0	5. 26*	3. 0	·1087*	4. 37	·03823	9. 0	55 ·0	57 ·3
2. 45	3. 0	4. 41	·1106		***	21. 0	50 ·8	52 ·3
	***	5. 34	·1062	6. 35	·03730			
3. 38	3. 20	5. 46	·1088		***			
4. 10	7. 0	5. 51	·1079	9. 10:	·03678			
4. 40	6. 35	6. 3	·1096	11. 47	·03709			
4. 54	8. 0	6. 16	·1078	16. 41	·03862			
5. 16	0. 30		***	21. 17	·04136			
5. 20	21. 1. 35	7. 15:	·1071	21. 35	·04097			
5. 31	20. 54. 0		***	22. 48	·04120			
5. 53	21. 3. 30	7. 48	·1080	23. 59	·04078			
6. 3	6. 30	8. 9	·1096					
6. 10	4. 0	8. 23	·1077					
6. 50	7. 0	8. 45	·1087					
7. 4	4. 55	8. 50	·1069					
7. 30	21. 3. 0	9. 3	·1086					
8. 22	0. 10		***					
8. 35	21. 4. 0	9. 46	·1079					
8. 45	20. 52. 0		***					
9. 0	56. 5	11. 18	·1085					
9. 15	55. 0	11. 47	·1096					
9. 39	59. 50	12. 3	·1087					
	***		***					
10. 55:	59. 30	14. 40	·1087					
	***	15. 7	·1095					
11. 50	20. 54. 20		***					
	***	19. 28	·1105					
13. 35	21. 0. 0		***					
14. 15	21. 0. 10	23. 59	·1093					
14. 45	20. 57. 20							
15. 55	21. 0. 20							
17. 38	1. 55							
19. 5	21. 2. 0							
	***							
20. 30	20. 59. 40							
21. 45	21. 0. 0							
	***							
23. 15	4. 0							
23. 59	4. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 29		Oct. 29		Oct. 29		Oct. 29		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 4. 0	0. 0	·1093	0. 0	·04078	1. 0	54 ·8	56 ·2
1. 5	5. 35		***	1. 46	{·03990	3. 0	56 ·3	58 ·2
	***	3. 42	·1082		{·03937	9. 0	56 ·7	59 ·4
1. 55	3. 0	3. 47	·1086	4. 34	·03612	20. 0	52 ·5	55 ·0
3. 45	1. 40	3. 56	·1081	7. 20	·03410	21. 0	51 ·8	55 ·0
5. 30:	0. 45		***	9. 6	{·03372	22. 0	52 ·7	55 ·0
15. 30	1. 5	6. 55	·1093		{·03804	23. 0	53 ·6	56 ·0
19. 15	21. 0. 35		***	12. 45:	·03786			
	***	18. 31	·1105	21. 46	·04075			
21. 15	20. 58. 0		***	23. 16	·04092			
	***	21. 2	·1094	23. 59	·04059			
22. 10	21. 0. 0		***					
22. 25	20. 58. 35	21. 47	·1098					
22. 30	21. 1. 5		***					
23. 8	1. 0	23. 59	·1078					
23. 59	5. 0							
Oct. 30		Oct. 30		Oct. 30		Oct. 30		
0. 0	21. 5. 0	0. 0	·1078	0. 0	·04059	0. 0	54 ·6	57 ·2
1. 0:	6. 0		***	1. 50	·03922	1. 0	55 ·7	57 ·3
2. 15	3. 10	1. 47	·1090	6. 18	·03596	2. 0	56 ·3	58 ·1
6. 13	21. 0. 0	2. 8	·1085	9. 17	·03498	3. 0	57 ·0	58 ·8
6. 31	20. 57. 15		***	9. 40	·03536	4. 0	57 ·9	58 ·7
7. 15	21. 0. 35	3. 4	·1091	14. 6	·03570	6. 0	58 ·0	60 ·0
7. 30	20. 59. 30		***	20. 36	·03762	9. 0	57 ·0	59 ·1
7. 50	21. 0. 30	4. 40	·1087	23. 17:	·03780	12. 0	56 ·5	59 ·0
	***	5. 27	·1093	23. 59	·03763	18. 0	53 ·4	56 ·0
10. 14	20. 59. 0		***			20. 0	54 ·5	55 ·5
10. 52	21. 0. 15	6. 16	·1088			21. 10	53 ·0	55 ·6
	***		***			22. 0	53 ·6	56 ·1
13. 45	20. 58. 25	8. 40	·1099			23. 0	54 ·7	57 ·0
17. 0	20. 59. 30	14. 43	·1099					
			***					
19. 35	21. 0. 0	19. 35	·1107					
20. 0	20. 58. 0		***					
20. 51	20. 57. 35	22. 50	·1093					
23. 10:	21. 6. 0		***					
23. 59	6. 0	23. 59	·1095					
Oct. 31		Oct. 31		Oct. 31		Oct. 31		
0. 0	21. 6. 0	0. 0	·1095	0. 0	·03763	0. 0	55 ·3	56 ·2
	***	0. 56	·1094	0. 46	·03819	1. 0	56 ·0	57 ·0
3. 15:	21. 0. 30		***	2. 26	·03762	2. 0	56 ·8	57 ·5
5. 45	20. 58. 30	2. 27	·1087	5. 37	{·03480	3. 0	57 ·5	58 ·0
8. 10	21. 0. 0	7. 26	·1103		{·03583	4. 0	58 ·5	58 ·5
9. 0	20. 58. 30	7. 47	·1105	8. 36:	·03526	9. 0	57 ·0	57 ·5
10. 35	58. 0		***	19. 25	·03847	21. 9	52 ·0	54 ·2
11. 16	59. 30	8. 19	·1099	23. 59	·03963			
	***		***					
13. 0	20. 59. 0	9. 36	·1106					
14. 15:	21. 0. 10		***					
17. 45	20. 59. 35	11. 7	·1103					
19. 34	21. 0. 30		***					
19. 50	20. 59. 0	12. 57	·1108					
	***	13. 32	·1103					
21. 35	21. 0. 30	13. 48	·1107					
23. 38	6. 50		***					
23. 59	6. 40	18. 13	·1113					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Oct. 31		h m		Nov. 1		
		h m				h m	°	°
		20. 7	·1107					
			***					
		21. 36	·1096					
			***					
		23. 59	·1099					
Nov. 1		Nov. 1		Nov. 1		Nov. 1		
0. 0	21. 6. 40	0. 0	·1099	0. 0	·03963	1. 0	53 ·0	54 ·8
0. 35	6. 30		***	1. 22	·03990	3. 0	53 ·1	55 ·0
1. 9	8. 10	2. 10	·1087	2. 15	·03924	9. 0	51 ·4	54 ·0
2. 0	3. 35		***	7. 30:	·03775	21. 0	44 ·2	48 ·0
2. 30	6. 5	3. 26	·1095	14. 0	·03994			
2. 55	3. 0		***	19. 50	·04310			
4. 8	21. 1. 35	4. 22	·1087		(†)			
4. 50	20. 56. 15	5. 33	·1099	23. 30	·04265			
5. 6	57. 5	5. 48	·1095	23. 59	·04260			
5. 30	55. 35	6. 8	·1099					
5. 50	58. 5		***					
6. 20	20. 59. 45	8. 6	·1099					
8. 30	21. 1. 0		***					
12. 10	1. 0	10. 3	·1106					
12. 31	3. 5	13. 39:	·1109					
13. 46	1. 20	14. 28	·1106					
14. 50	3. 0		***					
	***	19. 12	·1115					
17. 17	2. 0		***					
17. 35	3. 0	23. 59	·1100					
17. 52	1. 45							
19. 0:	2. 0							
20. 10	21. 0. 0							
21. 30	20. 59. 0							
23. 59	21. 4. 0							
Nov. 2		Nov. 2		Nov. 2		Nov. 2		
0. 0	21. 4. 0	0. 0	·1100	0. 0	·04260	1. 04	8 ·0	49 ·6
0. 54	5. 45	0. 17	·1104	2. 0:	·04039	3. 04	9 ·3	50 ·7
1. 17	6. 30		(†)	4. 45	·03870	9. 04	8 ·2	49 ·3
3. 30	3. 0	1. 0	·1113*	10. 45:	·03712	21. 404	3 ·0	46 ·9
6. 0	1. 5	1. 18	·1108	16. 43	·03840			
6. 55	2. 50		***	22. 30	·04120			
7. 14	1. 0	3. 5	·1096	23. 59	·04130			
	***	4. 17	·1104					
7. 44	21. 2. 0	5. 46	·1099					
	***		***					
8. 35	20. 58. 0	6. 47	·1100					
8. 47	21. 0. 0	7. 7	·1093					
8. 58	20. 59. 0	7. 36	·1101					
9. 10	21. 0. 10	7. 48	·1094					
9. 39	20. 59. 5	8. 12	·1100					
9. 53	21. 3. 0	8. 23	·1099					
10. 15	21. 2. 0	8. 47	·1110					
10. 40	20. 59. 0	9. 11	·1103					
10. 47	21. 0. 10	9. 49	·1112					
11. 10	20. 57. 30	10. 6	·1107					
11. 30	56. 0	10. 20	·1108					
12. 0:	59. 10	10. 43	·1113					
12. 30	20. 56. 45	11. 17	·1100					
13. 15:	21. 0. 15	11. 36	·1108					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 2		Nov. 2						
h m	° ′ ″	h m		h m		h m	°	°
15. 30	21. 2. 10	13. 7	·1102					
15. 50	1. 0		***					
	***	18. 6	·1115					
17. 0	2. 0		***					
	***	19. 7	·1116					
18. 24	21. 2. 45	19. 30	·1109					
	***		***					
20. 45	20. 59. 0	20. 3	·1113					
	***		***					
22. 0	20. 59. 30	22. 8	·1104					
23. 59	21. 6. 0		***					
		23. 59	·1104					
Nov. 3		Nov. 3		Nov. 3		Nov. 3		
0. 0	21. 6. 0	0. 0	·1104	0. 0	·04130	8. 40	47 ·3	50 ·2
0. 45	7. 25		***	4. 0	·03942	21. 0	41 ·0	45 ·0
1. 30	6. 45	1. 35	·1110	10. 30:	·03725			
1. 51	7. 40		***	17. 0	·03940			
3. 25	3. 10	3. 12	·1106	21. 0	·04200			
7. 15	0. 30		***		·03880			
11. 30	0. 0	4. 46	·1113	23. 59	·03942			
17. 0	3. 0		***					
19. 0	21. 2. 0	6. 36	·1112					
20. 23	20. 59. 5		***					
	***	10. 42	·1113					
21. 45	21. 0. 30		***					
23. 59	6. 45	12. 23	·1117					
		12. 46	·1114					
			***					
		14. 31	·1120					
		17. 12	·1127					
		19. 35	·1126					
			***					
		20. 50	·1118					
			***					
		21. 47	·1116					
			***					
		23. 5	·1106					
		23. 59	·1105					
Nov. 4		Nov. 4		Nov. 4		Nov. 4		
0. 0	21. 6. 50	0. 0	·1105	0. 0	·03942	1. 0	45 ·8	47 ·9
0. 20	7. 25	2. 0	·1110	3. 0	·03710	3. 0	48 ·2	50 ·1
3. 40	21. 2. 30	3. 57	·1105	8. 0:	·03241	9. 0	50 ·8	52 ·3
9. 30:	20. 59. 40		***	14. 0	·03160	21. 10	52 ·0	53 ·1
14. 10	21. 0. 30	7. 36	·1114	17. 15	·03180			
20. 0	20. 59. 0		***	21. 0	·03180			
20. 45	59. 30	14. 20	·1113		(†)			
	(†)		***					
		18. 17	·1114					
		21. 6	·1100					
			(†)					
Nov. 5		Nov. 5		Nov. 5		Nov. 5		
	(†)		(†)		(†)	1. 0	54 ·8	55 ·2
1. 15	21. 5. 5	0. 56	·1107	1. 0	·03100	3. 0	56 ·3	56 ·3
2. 42	3. 0		***		·03125	9. 0	54 ·0	55 ·5
	***	2. 43	·1100	1. 55	·03250	20. 0	49 ·4	51 ·0
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 5		Nov. 5		Nov. 5		Nov. 5		
h m	° ′ ″	h m		h m		h m	°	°
4. 55	21. 2. 0	4. 47	·1103	3. 48	·03210	21. 0	49 ·3	51 ·2
6. 50	3. 15	6. 3	·1097		·03408	22. 0	50 ·0	51 ·3
	***	6. 45	·1099	6. 50	·03440	23. 0	50 ·6	52 ·1
9. 0	1. 0	7. 12	·1095	9. 7	·03460			
	***	7. 48	·1101	12. 0:	·03566			
11. 30	2. 0		***	15. 45	·03825			
17. 0:	21. 1. 25	9. 40	·1099	22. 50:	·04100			
21. 0	20. 57. 10		***	23. 59	·04095			
23. 50	21. 8. 35	13. 35	·1109					
	(†)	16. 12	·1117					
		18. 46	·1115					
			***					
		22. 31	·1096					
			***					
		22. 46	·1103					
			***					
		23. 59	·1100					
Nov. 6		Nov. 6		Nov. 6		Nov. 6		
	(†)	0. 0	·1100	0. 0	·04095	0. 0	51 ·0	52 ·7
0. 50	21. 9. 0		***	1. 0:	·04070	1. 0	52 ·0	53 ·3
1. 15	7. 0	1. 55	·1100	10. 15	·03580	2. 0	53 ·0	54 ·2
2. 6	7. 0		***	13. 30:	·03555	3. 0	53 ·7	54 ·8
2. 36	5. 10	2. 51	·1106	23. 59	·04005	4. 0	53 ·9	54 ·8
3. 0	6. 0		***			6. 0	55 ·0	55 ·7
5. 29	2. 0	3. 42	·1103			9. 0	55 ·3	56 ·0
6. 0	2. 50	4. 6	·1099			12. 0	55 ·1	55 ·7
7. 15:	1. 0		***			18. 0	49 ·5	52 ·0
8. 8	21. 0. 40	5. 45	·1101			20. 0	48 ·1	50 ·7
9. 2	20. 54. 30		***			21. 0	48 ·0	50 ·8
10. 10	20. 59. 30	8. 7	·1099			22. 0	48 ·0	50 ·7
11. 45	21. 0. 15	8. 39:	·1094			23. 0	48 ·7	51 ·2
15. 15	2. 55	9. 4	·1102					
	***		***					
19. 15	21. 2. 0	10. 26	·1099					
	***		***					
20. 14	20. 59. 0	15. 43	·1113					
	***		***					
21. 44	21. 0. 10	17. 35	·1123					
22. 25	3. 25		***					
	***	19. 40	·1123					
23. 30:	10. 0		***					
	***	20. 46	·1107					
23. 59	9. 10		***					
		21. 45	·1109					
			***					
		23. 59	·1082					
Nov. 7		Nov. 7		Nov. 7		Nov. 7		
0. 0	21. 9. 10	0. 0	·1082	0. 0	·04005	0. 0	50 ·3	52 ·2
	(†)		***	0. 45	·04030	1. 0	51 ·7	52 ·3
1. 0	10. 0	0. 36	·1081	2. 0	·03960	3. 0	54 ·2	55 ·0
1. 9	7. 50	1. 7	·1085	4. 35:	·03735	9. 10	54 ·1	55 ·0
1. 32	8. 20	1. 21	·1078	5. 38	·03768	21. 0	46 ·0	49 ·0
1. 55	6. 5		***	6. 16	·03645			
2. 9	8. 0	2. 5	·1086	6. 30	·03805			
2. 40	6. 0		***	6. 45	·03620			
3. 0	10. 35	2. 36	·1080	7. 12	·03560			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 7		Nov. 7		Nov. 7				
h m	° ′ ″	h m		h m		h m	°	°
3. 30	21. 8. 40	2. 56	·1088	8. 15	·03616			
			***					
3. 50	21. 10. 0			9. 0	·03560			
4. 50	20. 59. 0	3. 47	·1083	10. 50	·03580			
			***					
5. 10	21. 2. 0			12. 0	·03512			
5. 24	6. 10	4. 40	·1061	17. 0	·03850			
5. 35	1. 0	4. 50	·1070	20. 0	·04000			
			***					
5. 42	21. 3. 30			22. 54	·04235			
6. 2	20. 58. 0	5. 16	·1068	23. 59	·04270			
6. 19	21. 14. 0	5. 27	·1056					
6. 36	20. 47. 15	5. 35	·1073					
6. 41	53. 30	5. 49	·1059					
6. 55	43. 20	6. 16	·1065					
7. 10	49. 0	6. 27	·1026					
7. 20	44. 30	6. 38	·1043					
7. 40	54. 0	6. 46	·1032					
7. 53	51. 0	7. 5	·1047					
8. 3	55. 30	7. 13	·1029					
8. 10	20. 54. 0	7. 22	·1048					
8. 30	21. 0. 0	7. 38	·1036					
8. 44	20. 55. 10	7. 50	·1061					
8. 53	55. 10	8. 6	·1048					
9. 2	53. 0	8. 20	·1065					
9. 15	56. 0	8. 40	·1055					
9. 45	20. 56. 0	8. 52	·1046					
10. 13	21. 0. 20	9. 7	·1062					
10. 35	1. 0	9. 26	·1054					
10. 55	4. 0	10. 3	·1072					
			***					
11. 10	1. 15							
11. 30	21. 2. 20	10. 43	·1076					
12. 0	20. 53. 0	11. 6	·1064					
13. 0:	21. 1. 50	11. 47	·1095					
			***					
14. 54	2. 0							
	***							
15. 50	6. 0	12. 16	·1090					
	***	12. 27	·1096					
16. 25	3. 0	12. 55	·1082					
	***		***					
17. 25	7. 30	14. 0	·1083					
18. 0	7. 0	14. 8	·1088					
18. 10	4. 40	14. 35	·1083					
	***		***					
19. 10	14. 0	16. 3	·1088					
19. 29	11. 10	16. 20	·1099					
	***		***					
20. 25	7. 0	17. 7	·1089					
			***					
20. 40	8. 30							
21. 10	6. 0	17. 42	·1099					
			***					
21. 28	8. 0							
	***	19. 3	·1073					
22. 11	2. 0	19. 15	·1077					
	***		***					
23. 0	6. 0	20. 46	·1070					
23. 10	4. 0	21. 27	·1089					
			***					
23. 59	10. 0							
		22. 6	·1080					
		22. 15	·1087					
			***					
		23. 59	·1075					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 8		Nov. 8		Nov. 8		Nov. 8		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	0. 0	·1075	0. 0	·04270	1. 0	48 ·0	50 ·0
1. 0	21. 5. 24*	0. 17	·1067	1. 15:	·04360	3. 0	51 ·3	52 ·7
			***					
1. 50	6. 45			4. 17	·04140	9. 0	52 ·0	53 ·0
2. 5	7. 15	1. 46	·1077	9. 15:	·03724	21. 14	43 ·0	45 ·5
			***					
2. 22	5. 30			15. 45	·03995			
2. 46	5. 40	3. 5	·1075	20. 30	·04370			
3. 51	1. 40	3. 17	·1079		(†)			
			***					
4. 6	21. 2. 10							
4. 30	20. 45. 50	3. 56	·1062					
5. 15	21. 1. 45		(†)					
5. 56	20. 58. 50	4. 35	·1088					
6. 17	21. 0. 40	4. 38	·1083					
7. 11	20. 50. 50	4. 46	·1087					
			***					
7. 43	54. 20							
8. 5	49. 15	5. 10	·1079					
8. 19	53. 30	5. 46	·1079					
8. 44	51. 0	6. 23	·1075					
9. 2	55. 0	6. 47	·1078					
9. 19	52. 30	7. 6	·1089					
9. 39	54. 30	7. 35	·1086					
9. 52	20. 53. 30	7. 46	·1079					
10. 33	21. 0. 15	8. 0	·1085					
11. 15	0. 40	8. 34	·1073					
	(†)	8. 45	·1077					
21. 14	0. 33*	9. 0	·1069					
		9. 17	·1075					
		9. 31	·1073					
		9. 50	·1080					
			***					
		11. 37	·1090					
		11. 48	·1087					
		12. 27	·1096					
		13. 43	·1094					
		14. 47	·1100					
			***					
		16. 25	·1097					
			***					
		18. 20	·1107					
			***					
		20. 3	·1106					
		21. 14	·1099					
			(†)					
Nov. 9		Nov. 9		Nov. 9		Nov. 9		
	(†)		(†)		(†)	1. 0	45 ·8	47 ·0
1. 8	21. 7. 10	1. 0	·1094*	1. 0	·04357*	3. 0	47 ·7	49 ·8
1. 45	6. 30	1. 5	·1099	2. 15	·04352	9. 0	49 ·0	51 ·5
			***					
3. 0	21. 6. 0			7. 0	·03960	22. 40	47 ·0	48 ·0
3. 28	20. 59. 30	2. 17	·1100	12. 15:	·03810			
	***	3. 18	·1089	19. 0	·04055			
			***					
4. 30:	21. 3. 0			22. 45	·04136			
5. 50	1. 20	3. 56	·1091	23. 59	·04120			
9. 55	2. 0	5. 3	·1104					
			***					
10. 45	21. 1. 0							
11. 16	20. 54. 30	9. 54	·1107					
			***					
12. 15	21. 1. 0							
13. 15	2. 0	10. 56	·1105					
15. 5	0. 0	11. 40	·1111					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 9		Nov. 9						
h m	° ′ ″	h m		h m		h m	°	°
15. 35	21. 1. 15	12. 27	·1104					
			***					
16. 15	20. 59. 10							
16. 44	21. 0. 50	16. 10	·1115					
			***					
17. 22	21. 0. 35							
18. 35	20. 58. 30	19. 12	·1113					
			***					
20. 39	20. 59. 0							
21. 35	21. 2. 5	21. 5	·1099					
			***					
22. 55	4. 30							
	***	23. 59	·1100					
23. 59	6. 0							
Nov. 10		Nov. 10		Nov. 10		Nov. 10		
0. 0	21. 6. 0	0. 0	·1100	0. 0	·04120	9. 25	50 ·5	51 ·5
0. 25	8. 30		***	5. 0	·03982	21. 0	46 ·8	50 ·0
0. 45	6. 30	2. 36	·1097	12. 30:	·03615			
2. 5	6. 20	3. 5	·1101	19. 45	·03910			
2. 24	3. 30	3. 32	·1094	21. 55	·03940			
3. 10	3. 20	4. 17	·1101		(†)			
3. 24	0. 45	7. 7	·1096					
4. 3	3. 0	10. 6	·1103					
4. 25	1. 0	11. 10	·1100					
5. 5	2. 0	11. 31	·1109					
5. 40	1. 10	11. 46	·1105					
6. 39	21. 1. 50	12. 15	·1111					
6. 55	20. 59. 35	12. 56	·1104					
	***		***					
8. 15	20. 59. 30	16. 43	·1107					
9. 24	21. 1. 35	18. 35	·1109					
10. 55	1. 0		***					
11. 20	5. 20	21. 51	·1092					
11. 53	1. 0		(†)					
12. 30	21. 2. 10							
16. 0	1. 0							
	***							
21. 45	1. 40							
	(†)							
Nov. 11		Nov. 11		Nov. 11		Nov. 11		
	(†)		(†)		(†)	1. 0	50 ·3	50 ·8
1. 0	21. 9. 24*	1. 0	·1083*	1. 0	·03980	3. 0	52 ·8	53 ·0
1. 15	7. 20	1. 22	·1085	1. 58	·03940	9. 0	52 ·5	53 ·3
1. 31	5. 0	1. 47	·1090	6. 30	·03496	21. 0	47 ·3	49 ·2
1. 50	6. 0		***	6. 56	{·03530			
	***	3. 12	·1081		{·03645			
3. 15	4. 0		***	9. 40	{·03615			
5. 0	1. 25	6. 41	·1091		{·03680			
	***		***	11. 15:	·03685			
6. 55	0. 0	8. 2	·1095	17. 15	·03926			
	***		***	22. 20:	·04080			
12. 40	1. 55	9. 56	·1094	23. 59	·04062			
13. 8	5. 30	10. 42	·1100					
13. 19	4. 0		***					
	(†)	12. 36	·1099					
14. 35	4. 0	13. 31	·1105					
15. 0	6. 0	14. 7	·1100					
16. 15	21. 1. 50		***					
17. 32	20. 59. 40	15. 46	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 11		Nov. 11						
h m	° ′ ″	h m		h m		h m	°	°
18. 0	21. 0. 30	17. 5	·1107					
19. 38	20. 59. 10	17. 42	·1114					
20. 0	21. 2. 0	18. 35	·1111					
20. 24	20. 59. 0	19. 15	·1116					
	***		***					
21. 0	21. 0. 25	20. 10	·1095					
	***		***					
21. 30	20. 59. 0	21. 7	·1110					
22. 15	21. 3. 25	22. 19	·1107					
22. 34	2. 0		***					
	***	23. 59	·1096					
23. 45	7. 35							
23. 59	6. 0							
Nov. 12		Nov. 12		Nov. 12		Nov. 12		
0. 0	21. 6. 0	0. 0	·1096	0. 0	·04062	1. 0	50 ·7	51 ·6
0. 20	5. 20		***	2. 5:	·03980	3. 0	52 ·3	54 ·0
0. 45	7. 0	3. 5	·1085	7. 15	·03522	9. 0	54 ·2	55 ·0
1. 10	9. 0	5. 17	·1093	7. 50	·03520	20. 0	47 ·0	48 ·0
1. 41	7. 5		***	7. 55	·03564	21. 15	46 ·3	50 ·0
2. 16	3. 0	7. 42	·1092	11. 0:	·03518	22. 0	46 ·3	50 ·0
3. 0	6. 30	8. 6	·1100	14. 6	·03540	23. 0	46 ·3	50 ·0
4. 30:	21. 1. 25	8. 18	·1095	21. 45	·03980			
6. 30	20. 59. 0	8. 46	·1099	23. 59	·04075			
7. 40	21. 0. 0	12. 37	·1103					
8. 0	20. 56. 0	12. 50	·1102					
8. 23	20. 56. 10	13. 36	·1113					
9. 45	21. 0. 55	14. 50	·1104					
12. 55	1. 0		***					
13. 28	5. 30	17. 17	·1110					
13. 50	0. 35	17. 45	·1102					
15. 44	1. 5	18. 40	·1113					
16. 5	2. 20	20. 3	***					
16. 55	1. 25		·1115					
17. 15	2. 30	23. 7	***					
18. 15	1. 25		·1093					
19. 15	3. 0	23. 59	***					
20. 50	0. 0		·1096					
21. 15:	1. 25							
23. 40	6. 0							
23. 59	5. 30							
Nov. 13		Nov. 13		Nov. 13		Nov. 13		
0. 0	21. 5. 30	0. 0	·1096	0. 0	·04075	0. 0	47 ·0	50 ·0
1. 10	3. 15	1. 35	·1100	3. 20	·04117	1. 0	48 ·0	50 ·0
5. 30	21. 0. 10		(†)	8. 30	·03960	2. 0	49 ·0	50 ·5
11. 35	20. 58. 0	3. 0	·1094*	14. 0:	·03830	3. 0	50 ·2	51 ·2
13. 25	21. 2. 0	3. 16	·1098	23. 0:	·04082	4. 0	50 ·9	51 ·0
18. 15	1. 55	3. 40	·1099	23. 59	·04085	6. 0	52 ·0	52 ·2
18. 45	21. 0. 0	4. 7:	·1094			9. 0	52 ·0	52 ·2
19. 55	20. 59. 30	4. 36	·1100			12. 0	51 ·6	51 ·8
	(†)		***			18. 0	49 ·5	50 ·2
21. 0	20. 59. 2*	6. 50	·1105			20. 0	49 ·0	49 ·8
21. 25	21. 3. 0		***			21. 0	49 ·0	50 ·0
22. 36	9. 0	11. 12	·1105			22. 0	49 ·6	50 ·2
23. 59	9. 30	11. 38	·1107			23. 0	50 ·3	50 ·4
		14. 6	·1105					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet
h m	° ′ ″	Nov. 13 h m		h m		h m	°	°
		17. 56:	·1115 ***					
		21. 33	·1095					
		21. 47	·1102					
		22. 6	·1089 ***					
		23. 0	·1089					
		23. 21	·1095					
		23. 59	·1094					
Nov. 14		Nov. 14		Nov. 14		Nov. 14		
0. 0	21. 9. 30	0. 0	·1094	0. 0	·04085	0. 0	51 ·0	50 ·5
1. 30	10. 30	0. 22	·1093	3. 0	·03986	1. 0	51 ·6	51 ·3
1. 51	8. 10		(†)	7. 15	·03780	2. 0	52 ·2	52 ·3
2. 10	9. 0	1. 0	·1088*	11. 45	·03742	3. 0	53 ·0	53 ·2
3. 51	3. 20	3. 0	·1090*	15. 0	·03760	4. 0	53 ·0	53 ·0
4. 10	4. 10	3. 6	·1087 ***	20. 8	·03965	9. 0	52 ·6	53 ·2
4. 50	2. 0			23. 59	·04115	21. 0	46 ·8	49 ·2
5. 6	3. 0	6. 35	·1093					
5. 45	21. 0. 5	7. 36	·1087					
6. 24	20. 59. 30	8. 35	·1099 ***					
6. 45	21. 0. 35							
7. 25	20. 57. 30	11. 4	·1099					
8. 10	21. 0. 0	11. 13	·1107					
9. 30	21. 0. 10	11. 40	·1103 ***					
10. 0	20. 57. 0							
10. 44	21. 0. 15	13. 58	·1111					
11. 40	20. 58. 0	14. 20	·1118 ***					
12. 15	21. 1. 50							
12. 50	2. 0	16. 16	·1106					
13. 5	4. 30	17. 20:	·1120					
13. 40	3. 0	18. 25:	·1121					
13. 57	5. 5	19. 48	·1105					
14. 30	21. 1. 30	20. 35	·1110 ***					
15. 8	20. 58. 0							
16. 0	21. 3. 30	22. 36	·1087 ***					
16. 32	4. 35							
17. 7	0. 0	23. 59	·1093					
18. 53	1. 40							
19. 50:	4. 0							
21. 0	0. 30							
22. 0	7. 0							
23. 10	9. 35 (†)							
Nov. 15		Nov. 15		Nov. 15		Nov. 15		
0. 0	21. 9. 10	0. 0	·1093	0. 0	·04115	1. 0	49 ·0	49 ·8
1. 0	9. 0 ***	0. 47	·1096	3. 30	·04020	3. 0	51 ·0	51 ·2
		2. 35	·1091 ***	8. 30:	·03762	9. 0	51 ·0	51 ·3
2. 40	9. 30 ***			12. 10	·03734	21. 0	42 ·0	44 ·0
		3. 12	·1077	17. 15	·03965			
3. 40	0. 50	3. 46	·1095	21. 47	·04276			
4. 0	2. 20	4. 38	1098 ***		(†)			
4. 20	2. 0							
5. 20	3. 35	5. 45	·1097 ***					
5. 45	2. 0							
10. 15	0. 0	6. 42	·1105 ***					
10. 40	2. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 15		Nov. 15						
h m	° ′ ″	h m		h m		h m	°	°
10. 54	21. 2. 0	10. 0	·1105 ***					
11. 25	6. 25							
12. 5	0. 0	10. 39	·1113					
13. 27	3. 0	10. 56	·1106 ***					
14. 10	1. 15							
14. 30	3. 0	11. 55	·1123					
14. 52	1. 0	12. 20	·1112					
15. 25	2. 5	12. 55	·1110					
16. 16	6. 0 ***	13. 40	·1116					
		14. 8	·1112					
17. 41	1. 10 ***	14. 17	·1117					
		14. 35	·1114 ***					
18. 40	3. 0 ***							
		16. 10	·1117					
19. 15:	2. 0	17. 39	·1131					
20. 0	21. 4. 10	19. 0	·1129 ***					
20. 51	20. 58. 20							
21. 7	21. 0. 0	20. 11	·1111 ***					
21. 30	20. 57. 35							
21. 47	20. 58. 0	21. 12	·1113 ***					
22. 7	21. 1. 0							
22. 16	20. 59. 10	22. 45	·1095					
22. 54	21. 7. 0 ***	22. 50	·1104 ***					
23. 35	7. 0	23. 17	·1093					
23. 59	8. 15		(†)					
Nov. 16		Nov. 16		Nov. 16		Nov. 16		
0. 0	21. 8. 10		(†)		(†)	1. 0	43 ·7	45 ·3
0. 16	7. 0	1. 0	·1090*	1. 0	·02434*	3. 0	46 ·0	46 ·7
0. 40:	8. 30	1. 42	·1102	2. 25	·02490	9. 0	45 ·8	47 ·0
1. 35	21. 6. 20	6. 13	·1107	3. 0	·02520	22. 23	42 ·0	44 ·0
2. 20	5. 35	6. 40	·1110		·02613			
2. 45	7. 5	7. 26	·1113	7. 0:	·02760			
4. 15	3. 0	10. 4	·1118	11. 0:	·02780			
5. 10	3. 0	11. 52	·1114	17. 5	·02910			
6. 24	1. 0	12. 7	·1116	23. 25	·03075			
6. 47	1. 40	12. 39	·1112	23. 59	·03090			
8. 0	21. 1. 5	19. 42	·1123					
10. 0	20. 58. 0	22. 27	·1109					
10. 41	21. 0. 0	22. 44	·1111					
10. 55	20. 58. 45		(†)					
14. 46	21. 2. 0 ***							
19. 0	21. 1. 0							
21. 30:	20. 59. 0							
23. 59	21. 3. 0							
Nov. 17		Nov. 17		Nov. 17		Nov. 17		
0. 0	21. 3. 0		(†)	0. 0	·03090	8. 30	43 ·0	44 ·2
2. 0:	4. 0	0. 17	·1108	1. 0	·03100	21. 0	36 ·3	39 ·0
5. 0	1. 10	1. 50	·1109	6. 45:	·03028			
13. 50	21. 2. 0	5. 55	·1119	13. 0	·03135			
14. 12	20. 59. 40	11. 6	·1123	15. 24	·03240			
14. 50	21. 2. 30 ***	11. 10	·1113 ***	20. 20	·03042			
16. 15	2. 0 ***	12. 7	·1128 ***	23. 59	·02875			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 17		Nov. 17						
h m	° ′ ″	h m		h m		h m	°	°
17. 55	21. 2. 50	15. 20	·1127					
			***					
20. 35	21. 1. 35							
21. 43	20. 59. 0	18. 17	·1141					
	***		***					
23. 59	21. 5. 25	20. 40	·1139					
			***					
		23. 45	·1113					
		23. 59	·1115					
Nov. 18		Nov. 18		Nov. 18		Nov. 18		
0. 0	21. 5. 25		(†)	0. 0	·02875	1. 0	39 ·0	40 ·5
0. 20	6. 0	1. 0	·1114*	2. 15	·02872	3. 0	41 ·2	42 ·4
1. 8	5. 15	3. 0	·1111*	8. 10	·02450	9. 20	43 ·2	44 ·2
1. 25	7. 0	5. 55	·1111	11. 0:	·02553	21. 0	37 ·0	40 ·0
1. 53	4. 0	6. 42	·1109	13. 54	·02525			
2. 5	5. 5	7. 45	·1113	19. 50	·02780			
2. 53	5. 0	8. 14	·1111	23. 0	·02930			
5. 0	21. 1. 0	8. 46	·1114	23. 59	·02930			
6. 39	20. 59. 40	9. 30	·1109					
7. 15	21. 0. 35	9. 55	·1114					
7. 54	20. 59. 0	12. 9	·1120					
8. 45	59. 0	12. 52	·1117					
9. 5	53. 30	13. 15	·1129					
10. 8	57. 0	13. 33	·1123					
10. 40	56. 20	13. 40	·1126					
11. 23	58. 30	13. 48	·1125					
	***	13. 59	·1131					
12. 14	58. 30	15. 7	·1124					
12. 24	56. 50	17. 13	·1135					
12. 44	59. 45	18. 56	·1119					
13. 3	20. 59. 0	19. 13	·1121					
13. 15	21. 5. 0	20. 36	·1118					
13. 53	20. 55. 0	21. 55	·1099					
14. 25	59. 10	22. 13	·1101					
15. 14	20. 59. 10	22. 39	·1096					
15. 45	21. 1. 35	22. 52	·1097					
16. 15	20. 57. 30	23. 13	·1091					
17. 0	21. 2. 0	23. 59	·1095					
17. 15	1. 0							
19. 0	9. 30							
20. 15	5. 30							
	***							
21. 30	5. 35							
22. 45	7. 25							
23. 30	11. 0							
	(†)							
Nov. 19		Nov. 19		Nov. 19		Nov. 19		
	(†)		(†)	0. 0	·02936	1. 0	41 ·2	42 ·7
0. 20	21. 10. 30	1. 0	·1094*	1. 30	·02840	3. 0	44 ·2	45 ·5
	***	3. 0	·1091	4. 36	·02500	9. 0	46 ·8	47 ·5
1. 25	8. 0	3. 46	·1083	8. 0:	·02860	21. 0	44 ·2	46 ·5
2. 20	6. 30		***	12. 45	·02943	22. 0	45 ·2	46 ·3
2. 40	8. 0	4. 47	·1093	21. 15	{·03007	23. 0	46 ·2	47 ·5
	***		***		{·03540			
3. 15	7. 30	5. 50	·1089	23. 0	·03550			
	***	6. 3	·1095	23. 59	·03470			
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 19		Nov. 19						
h m	° ′ ″	h m		h m		h m	°	°
4. 28	21. 2. 30	6. 38	·1086					
4. 37	4. 0	6. 47	·1093					
4. 58	2. 30	7. 5	·1088					
5. 8	4. 50	7. 47	·1090					
5. 17	3. 30	8. 7	·1085					
5. 30	5. 15		***					
6. 2	2. 35	9. 36	·1098					
6. 10	3. 45		***					
6. 45	1. 20	10. 35	·1098					
7. 0	21. 3. 15	10. 48	·1105					
7. 35	20. 59. 0	11. 7	·1097					
8. 10	21. 0. 0	12. 6	·1109					
8. 25	20. 58. 30		***					
8. 44	59. 0	16. 27	·1117					
9. 0	57. 15	20. 20	·1108					
9. 41	59. 0		***					
10. 42	55. 40	23. 15	·1093					
10. 50	56. 50		***					
11. 10	56. 0	23. 59	·1097					
12. 0	20. 59. 0							
15. 45	21. 1. 5							
18. 35	20. 59. 0							
20. 40	20. 59. 0							
21. 30	21. 1. 0							
	***							
22. 40	2. 0							
23. 14	4. 30							
23 59	4. 0							
Nov. 20		Nov. 20		Nov. 20		Nov. 20		
0. 0	21. 4. 0	0. 0	·1097	0. 0	·03470	0. 0	45 ·2	48 ·5
4. 0	21. 1. 25	2. 37:	·1086	1. 15	·03400	1. 0	48 ·3	49 ·6
4. 30	20. 59. 45	4. 48	·1094	3. 20	·03136	2. 0	50 ·0	51 ·8
10. 30	59. 30	14. 11	·1103	4. 45	·03232	3. 0	52 ·0	53 ·2
12. 0	20. 59. 0	18. 3:	·1118	6. 0	{·03248	6. 0	53 ·2	54 ·0
16. 0:	21. 1. 20	20. 56	·1109		{·03630	9. 0	50 ·5	51 ·5
18. 15	20. 59. 10	23. 5	·1100	9. 0:	·03592	12. 0	49 ·4	51 ·0
21. 0	58. 0	23. 59	·1100	14. 45	·03780	21. 0	48 ·0	49 ·9
21. 51	20. 59. 20			21. 0:	·03962	22. 0	48 ·3	50 ·2
23. 59	21. 3. 30			23. 59	·03910	23. 0	49 ·6	51 ·1
Nov. 21		Nov. 21		Nov. 21		Nov. 21		
0. 0	21. 3. 30	0. 0	·1100	0. 0	·03910	0. 0	51 ·0	52 ·2
1. 15:	4. 0	1. 17	·1100	1. 0	·03875	1. 0	51 ·7	53 ·0
3. 25	21. 0. 55	3. 40:	·1091	6. 5:	·03462	2. 0	52 ·7	53 ·8
5. 8	20. 59. 30	5. 38	·1097	12. 0:	·03400	3. 0	53 ·8	54 ·8
7. 40	21. 0. 0	5. 50	·1092	15. 15:	·03271	9. 0	55 ·5	56 ·0
9. 0	20. 58. 0		***	23. 10	·03425	21. 0	52 ·8	55 ·0
12. 45	20. 59. 0	7. 26	·1101	23. 59	·03396			
13. 25	21. 0. 55		***					
13. 50	20. 59. 10	13. 0	·1097					
	***	13. 19	·1105					
17. 15	21. 0. 15	14. 10	·1097					
18. 10	21. 1. 30	15. 7	·1095					
20. 23	20. 59. 0	17. 8	·1099					
20. 53	20. 57. 30	17. 45	·1097					
23. 35	21. 1. 30	18. 47	·1101					
23. 59	4. 0	20. 17	·1100					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

VERTICAL FORCE.—November 15d. 22h. The adjustments were altered so that the scale-reading was diminished by $11^{div.}27$, or by 0·01684 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Nov.21 h m		h m		h m	°	°
		23. 5	·1088					
		23. 59	·1087					
Nov.22		Nov.22		Nov.22		Nov.22		
0. 0	21. 4. 0	0. 0	·1087	0. 0	·03396	1. 0	55 ·0	56 ·0
	***		***	6. 0	·03260	3. 0	56 ·0	56 ·2
2. 10	4. 0	2. 58	·1104	9. 15	·03387	9. 0	52 ·8	54 ·0
	***		***	14. 15	·03575	21. 0	45 ·6	48 ·2
3. 30	3. 50	3. 46	·1099	20. 35	·03996			
3. 45	1. 30		***	22. 45	·03800			
7. 20:	21. 3. 45	6. 17	·1103	23. 59	·03764			
	***		***					
9. 0	20. 59. 35	7. 36	·1100					
9. 40	21. 1. 30	8. 10	·1096					
	***	8. 37	·1080					
10. 25	0. 0		***					
10. 53	1. 25	10. 26	·1100					
11. 1	0. 30		***					
12. 30	21. 0. 35	12. 5	·1099					
13. 20	20. 57. 0	12. 46	·1107					
14. 25	21. 1. 0	13. 37	·1101					
15. 30	1. 30	16. 46	·1111					
18. 6	2. 0	17. 37	·1116					
18. 25	3. 0		***					
21. 0	1. 50	20. 11	·1116					
21. 25	1. 0	21. 10	·1105					
21. 45	2. 30	21. 47	·1111					
22. 16	2. 20	22. 21	·1105					
23. 30	6. 0	22. 40	·1109					
	***		***					
23. 59	6. 0	23. 59	·1102					
Nov.23		Nov.23		Nov.23		Nov.23		
0. 0	21. 6. 0		(†)	0. 0	·03764	1. 0	48 ·9	50 ·0
	***	1. 0	·1103*	2. 13	·03708	3. 0	51 ·7	52 ·2
1. 57	7. 0	2. 8	·1098	4. 30	·03524	9. 0	49 ·0	50 ·0
2. 30	4. 0	2. 37	·1091	8. 25	·03440	22. 5	41 ·0	44 ·5
2. 45	5. 45	3. 15	·1081	9. 40	·03442			
3. 58	2. 20	5. 6	·1081	10. 18	·03400			
4. 10	4. 0	5. 30	·1069	11. 24	·03482			
4. 43	1. 5	6. 14	·1081	12. 25	·03461			
5. 0	21. 3. 30	7. 11	·1064	13. 33	·03506			
	***	7. 19	·1069	15. 10	·03604			
5. 50	20. 59. 10	8. 7	·1068	19. 7	·03750			
6. 0	21. 1. 0	8. 21	·1078	21. 0	·03640			
6. 14	20. 59. 0	8. 46	·1067	22. 45	·03480			
6. 25	21. 1. 5	8. 52	·1072	23. 59	·03400			
6. 43	20. 59. 0		(†)					
7. 0	55. 45	9. 0	·1070*					
7. 30	53. 0	9. 53	·1090					
7. 50	53. 50	10. 1	·1087					
8. 15	51. 40	10. 11	·1094					
9. 0	54. 0	10. 50	·1065					
9. 15	36. 0	11. 42	·1093					
9. 50	48. 10		(†)					
10. 17	48. 15	12. 40	·1101					
10. 36	47. 0	12. 51	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov.23	° ′ ″	Nov.23 h m		h m		h m	°	°
h m								
11. 16	20. 55. 45	13. 11	·1103					
11. 30	20. 54. 0	13. 22	·1109					
11. 45	21. 2. 0	14. 18	·1093					
12. 13	20. 52. 10	15. 3	·1097					
13. 0	48. 20	15. 22	·1106					
14. 14	20. 57. 10	16. 11	·1109					
	***	16. 39	·1102					
15. 15	21. 0. 25	16. 56	·1105					
15. 50:	0. 10	17. 14	·1102					
16. 54	6. 0	17. 46	·1113					
17. 30	3. 0	19. 3	·1110					
18. 33	2. 5	19. 28	·1116					
	***	22. 57	·1112					
20. 0	3. 30		(†)					
20. 30	0. 0							
20. 50	2. 0							
21. 0	0. 0							
21. 8	1. 10							
23. 59	4. 10							
Nov.24		Nov.24		Nov.24		Nov.24		
0. 0	21. 4. 20		(†)	0. 0	·03400	9. 10	43 ·0	45 ·0
0. 10	6. 20	0. 17	·1096	0. 47	·03352	21. 0	40 ·2	43 ·0
1. 5	1. 30	0. 42	·1086	2. 0:	·03345			
3. 20	21. 1. 0	1. 17	·1107	8. 0	·03140			
5. 55	20. 58. 50		***	14. 0	·03360			
7. 0	59. 30	4. 38	·1109		·03312			
7. 20:	20. 58. 40		***	17. 0	·03068			
7. 55	21. 0. 30	6. 42	·1114	20. 0:	·02932			
8. 50	21. 1. 0	7. 0	·1109	23. 0	·02860			
10. 0	20. 59. 30	8. 35	·1116	23. 59	·02790			
10. 45	21. 2. 0	11. 36	·1112					
11. 30	20. 59. 35	11. 53	·1117					
13. 50	21. 2. 10	13. 15	·1113					
14. 15	1. 0	14. 17	·1116					
15. 15:	21. 1. 15	14. 55	·1123					
16. 30	20. 59. 25		***					
19. 45	58. 50	17. 50	·1118					
	***	20. 20	·1119					
21. 0	20. 59. 0		***					
21. 10	21. 2. 0	22. 25	·1109					
21. 50	1. 5	23. 59	·1104					
23. 0	5. 0							
	(†)							
Nov.25		Nov.25		Nov.25		Nov.25		
0. 0	21. 3. 30	0. 0	·1104	0. 0	·02790	1. 0	45 ·2	46 ·3
1. 0	4. 30	2. 47	·1104	2. 24	·02616	3. 0	47 ·8	48 ·3
2. 50	3. 15	3. 18	·1098	6. 7	·02252	9. 0	50 ·0	50 ·5
3. 30	21. 1. 35	3. 42	·1083	8. 17	·02370	21. 0	53 ·0	53 ·3
3. 55	20. 57. 30	4. 5	·1091	17. 45	·02438			
4. 20	20. 57. 30	4. 17	·1088	21. 10	·02467			
5. 5	21. 2. 0	4. 45	·1097		(†)			
5. 45	0. 30		***					
6. 8	21. 1. 0	6. 27	·1091					
7. 0	20. 38. 30	7. 7	·1097					
7. 30	58. 5		***					
8. 6	53. 40	7. 56	·1087					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov.25		Nov.25						
h m	° ′ ″	h m		h m		h m	°	°
8. 22	20. 55. 35	8. 40	·1109					
8. 37	50. 0	9. 16	·1097					
9. 5	55. 30	10. 13	·1111					
9. 35	56. 10	11. 17	·1101					
10. 20:	52. 35	12. 18	·1107					
	***	13. 51	·1103					
13. 53	59. 40	15. 10	·1109					
15. 11	58. 0		***					
16. 0	58. 35	18. 31	·1109					
18. 50	59. 30	19. 12	·1111					
20. 30	59. 30	21. 6	·1098					
21. 0	59. 9*		(†)					
	(†)							
Nov.26		Nov.26		Nov.26		Nov.26		
	(†)		(†)		(†)	1. 0	56·8	56·8
0. 47	21. 4. 0	1. 0	·1078*	0. 45	·02680	3. 0	58·0	59·5
1. 15	7. 10	1. 6	·1080	2. 0:	·02713	9. 0	59·0	60·6
2. 0	7. 30	2. 22	·1069	5. 15	·03052	21. 0	53·0	54·8
2. 15	9. 25	3. 5	·1077	11. 0:	·03410	22. 0	53·0	54·7
2. 54	6. 0	3. 27	·1068	13. 21	·03400	23. 0	53·0	54·7
3. 8	7. 0		***	19. 50	·03634			
3. 36	4. 30	4. 13	·1075	23. 59	·03860			
	***	4. 43	·1062					
4. 22	7. 0	5. 5	·1073					
5. 5	3. 0	5. 11	·1065					
5. 11	21. 5. 30	5. 18	·1073					
5. 25	20. 59. 30	5. 46	·1061					
5. 38	21. 4. 0	6. 4	·1069					
6. 0	0. 0		***					
6. 23	1. 35	6. 26	·1067					
6. 38	1. 0	7. 34	·1082					
6. 45	2. 0		***					
8. 0:	0. 30	11. 35	·1080					
			***					
12. 0	0. 0	12. 26	·1089					
12. 40	21. 2. 0		***					
13. 15	20. 59. 0	14. 25	·1082					
14. 5	21. 0. 10		***					
14. 55:	1. 30	15. 22	·1091					
16. 45	21. 0. 30		***					
16. 58	20. 59. 0	16. 25	·1086					
17. 10	21. 1. 0		***					
17. 30	0. 0	20. 3	·1094					
	***		***					
21. 14	21. 1. 0	23. 30	·1080					
22. 0	20. 59. 10	23. 59	·1082					
23. 59	21. 2. 20							
Nov.27		Nov.27		Nov.27		Nov.27		
0. 0	21. 2. 20	0. 0	·1082	0. 0	·03860	0. 0	53·6	55·0
2. 0	3. 45		***	1. 47	·03861	1. 0	54·0	55·0
3. 0	2. 0	2. 50	·1082	7. 15:	·03680	2. 0	54·6	55·2
4. 40	4. 0		***	12. 0	·03820	3. 0	55·1	55·3
	***	4. 46	·1088	19. 0	·04208	6. 0	55·0	55·2
5. 41	2. 0	5. 15	·1084	21. 0	·04120	9. 0	53·5	54·0
6. 1	3. 0		***		·04045	12. 0	51·9	52·7
	***	5. 47	·1091	21. 45	·04044	21. 0	47·0	49·2
7. 14	0. 0		***		·03930	22. 0	47·7	49·5

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Nov.27		Nov.27		Nov.27		Nov.27		
h m	° ′ ″	h m		h m		h m	°	°
7. 30	21. 1. 5	6. 26	·1085	22. 2	·03940	23. 0	48·4	49·8
8. 30	0. 10		***		·03624			
	***	8. 27	·1101	23. 59	·03652			
14. 0	2. 0		***					
20. 8	21. 0. 0	12. 3	·1107					
20. 45	20. 58. 5		***					
23. 9	21. 3. 20	20. 17	·1115					
23. 59	3. 0		***					
		23. 59	·1100					
Nov.28		Nov.28		Nov.28		Nov.28		
0. 0	21. 3. 0	0. 0	·1100	0. 0	·03652	0. 0	49·0	50·0
1. 33	4. 0	1. 18	·1101	2. 15	·03560	1. 0	49·8	50·9
2. 10	2. 25	2. 17	·1097	6. 30:	·03170	2. 0	51·0	51·7
3. 25:	21. 2. 0	2. 54	·1100	9. 0	·03108	3. 0	52·2	52·7
4. 25	20. 59. 30	4. 17	·1099	9. 35	·03120	9. 0	53·2	54·0
5. 44	21. 1. 25	5. 7	·1103	11. 0:	·03115	21. 0	51·2	53·0
6. 14	0. 0	5. 46	·1098	16. 20	·03240			
6. 50	1. 10		***	22. 30:	·03450			
	***	6. 35	·1100	23. 59	·03385			
8. 4	21. 1. 0	6. 53	·1096					
8. 30	20. 59. 0		***					
9. 0	51. 0	8. 47	·1100					
9. 35	58. 5	9. 25	·1087					
10. 15	59. 10		***					
11. 24	58. 30	9. 43	·1089					
12. 0	59. 0	10. 17	·1100					
12. 35	56. 50		***					
13. 28	57. 5	12. 12	·1109					
14. 0:	56. 0		***					
	***	13. 6	·1104					
15. 20	59. 10		***					
17. 15:	57. 0	19. 50	·1115					
21. 8	20. 58. 10	23. 59	·1100					
	***							
23. 59	21. 3. 35							
Nov.29		Nov.29		Nov.29		Nov.29		
0. 0	21. 3. 35	0. 0	·1100	0. 0	·03385	1. 0	55·8	56·5
1. 22	3. 0	1. 5	·1095	2. 0	·03308	3. 0	57·8	58·5
2. 0	4. 0	1. 43	·1085	5. 7	·03046	9. 0	60·0	60·7
3. 0	3. 30	5. 18	·1096	11. 0:	·03250	21. 0	58·8	59·7
4. 55	0. 0		***	14. 30	·03290			
5. 53	21. 0. 0	8. 3	·1091	21. 45	·03367			
	***	9. 20	·1091	23. 59	·03322			
8. 0	20. 57. 25	9. 46	·1097					
9. 0	58. 0	10. 15	·1087					
9. 36	54. 0	10. 31	·1092					
10. 0	55. 5		***					
10. 30	58. 0	16. 3	·1093					
11. 35	20. 57. 15		***					
14. 16	21. 0. 0	18. 27:	·1103					
15. 15	20. 58. 20	20. 46	·1099					
16. 0	59. 5	23. 5	·1084					
	***	23. 20	·1087					
18. 45	57. 0	23. 59	·1084					
21. 0	20. 57. 30							
22. 35	21. 1. 15							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

November 23. The Times of the Horizontal Force may be a little in error.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 29								
h m	° ′ ″	h m		h m		h m	°	°
22. 46	21. 0. 30							
	***							
23. 59	3. 0							
Nov. 30		Nov. 30		Nov. 30		Nov. 30		
0. 0	21. 3. 0	0. 0	·1084	0. 0	·03322	1. 0	61 ·0	60 ·8
0. 40	4. 0	1. 15	·1071	3. 7	{·03560	3. 0	61 ·3	61 ·2
1. 41	2. 50		***		{·03664	9. 0	56 ·5	58 ·0
	***	2. 0	·1070	4. 15	·03600	22. 15	51 ·0	51 ·2
2. 25	4. 0	2. 45	·1061	7. 55	·03567			
2. 51	2. 0	3. 18	·1072	11. 0	·03680			
3. 25	21. 1. 30	3. 29	·1061	16. 55	·04210			
3. 36	20. 59. 30		***	23. 7	·04165			
4. 22	20. 59. 40	4. 50	·1073	23. 59	·04200			
	***	5. 7	·1070					
5. 14	21. 1. 45		***					
5. 30	0. 45	7. 35	·1079					
7. 16	21. 1. 15		***					
8. 45	20. 58. 0	8. 47	·1073					
9. 5	59. 35		***					
9. 21	20. 58. 10	11. 3	·1089					
10. 0	21. 1. 0		***					
	***	17. 2	·1100					
12. 40	2. 0	20. 43	·1100					
	***		***					
17. 11	21. 1. 10	23. 59	·1093					
18. 5	20. 59. 40							
	***							
20. 40	21. 0. 0							
21. 30	1. 50							
21. 53	1. 0							
23. 35	4. 0							
23. 59	3. 45							
Dec. 1		Dec. 1		Dec. 1		Dec. 1		
0. 0	21. 3. 45	0. 0	·1093	0. 0	·04200	6. 25	53 ·2	54 ·8
2. 55	2. 35	1. 5	·1087	1. 5:	·04203	21. 0	45 ·0	47 ·0
3. 25	1. 30	1. 47	·1090	3. 54	·04040			
3. 54	1. 35	2. 13	·1097	6. 0	·03921			
4. 44	0. 20	2. 46	·1092	6. 53	·03936			
5. 24	1. 30	3. 55	·1091	10. 45	·03800			
5. 36	3. 0	4. 18	·1086	13. 30	·03880			
5. 50	3. 0	4. 50	·1090	18. 35	·04204			
6. 31	8. 30	5. 6	·1094	22. 30	·04175			
6. 46	3. 10	5. 26	·1104		(†)			
6. 52	21. 4. 5	5. 43	·1092					
7. 10	20. 58. 30	5. 56	·1100					
7. 47	21. 1. 50	7. 5	·1072					
8. 7	20. 59. 30	7. 14	·1079					
8. 25	21. 1. 25		***					
8. 46	0. 0	7. 48	·1078					
9. 16	21. 0. 0		***					
9. 35	20. 57. 50	9. 13	·1097					
10. 14	55. 5	9. 50	·1089					
10. 39	59. 0	10. 28	·1113					
10. 52	20. 58. 0	11. 3	·1095					
12. 21	21. 4. 10		***					
12. 55	1. 45	14. 41	·1095					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 1		Dec. 1						
h m	° ′ ″	h m		h m		h m	°	°
14. 30	21. 4. 30	15. 29	·1101					
	***		***					
14. 50	3. 30							
17. 52	2. 40	19. 55	·1108					
18. 6	1. 30	20. 46	·1101					
19. 25	3. 0	21. 50	·1103					
20. 15	0. 30	23. 7	·1097					
	***	23. 59	·1099					
23. 14	5. 5							
23. 59	3. 45							
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
0. 0	21. 3. 45	0. 0	·1099		(†)	1. 0	46 ·3	48 ·8
	(†)		(†)	1. 0	·04365*	3. 0	49 ·8	50 ·7
1. 0	3. 2*	1. 0	·1099*	2. 20	·04328	9. 0	49 ·0	51 ·8
3. 0	1. 50*	2. 45	·1096	9. 0:	·03768	21. 0	41 ·7	45 ·2
4. 0	21. 0. 0	3. 57	·1089	13. 0	·03865			
5. 55	20. 58. 10	6. 46	·1093	21. 5	·04315			
7. 24	59. 40	8. 56	·1095	23. 59	·04295			
7. 50	59. 0	9. 15	·1092					
8. 43	59. 35		(†)					
9. 0	58. 0	16. 50	·1111					
	***	20. 17	·1114					
10. 47	20. 59. 0	22. 13	·1104					
17. 10	21. 3. 0	23. 59	·1101					
20. 15	21. 1. 45							
20. 55	20. 59. 0							
21. 55	20. 59. 35							
23. 59	21. 5. 55							
Dec. 3		Dec. 3		Dec. 3		Dec. 3		
0. 0	21. 5. 55	0. 0	·1101	0. 0	·04295	1. 0	45 ·3	47 ·2
0. 54	21. 4. 25	0. 47	·1100	1. 0:	·04308	3. 0	49 ·3	50 ·2
5. 7	20. 59. 30	2. 18	·1093	6. 0	·03625	9. 0	50 ·1	51 ·0
7. 50	21. 1. 15	3. 7	·1093	7. 50	·03480	21. 0	41 ·5	44 ·0
8. 40	0. 50		***	10. 30:	·03500	22. 0	42 ·0	44 ·0
9. 0	1. 40	5. 36	·1097	13. 50	·03600	23. 0	42 ·6	44 ·7
9. 45	0. 30		***	23. 24	·04304			
10. 14	1. 0	8. 35	·1094		(†)			
12. 36	2. 0		***					
12. 51	0. 20	11. 37	·1105					
13. 54	0. 30	12. 35	·1106					
14. 35:	3. 0	12. 46	·1109					
20. 0	21. 1. 0	13. 15	·1105					
20. 30	20. 59. 5	13. 43:	·1112					
20. 50	20. 59. 0	14. 5	·1105					
21. 57	21. 4. 30		***					
	***	20. 7	·1122					
22. 32	5. 30		***					
22. 45	3. 25	21. 29	·1108					
23. 5	6. 0		***					
23. 45	6. 40	22. 37	·1117					
	(†)	22. 56	·1109					
			***					
		23. 59	·1113					
Dec. 4		Dec. 4		Dec. 4		Dec. 4		
	(†)	0. 0	·1113		(†)	0. 0	43 ·0	45 ·3
0. 55	21. 6. 30		(†)	0. 26	·04306	1. 0	44 ·0	45 ·8
1. 10	9. 0	1. 0	·1106*	3. 45	·04005	2. 0	45 ·6	47 ·7

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 4		Dec. 4		Dec. 4		Dec. 4		
h m	° ′ ″	h m		h m		h m	°	°
1. 44	21. 7. 0	3. 0	·1064*	3. 50	·04048	3. 0	48·0	49·5
	***	6. 51	·1077	4. 33	·03930	6. 0	48·5	49·5
2. 23	11. 35	7. 12	·1073	7. 30	·03580	9. 0	49·0	50·5
2. 54	7. 45	7. 37	·1079	8. 29	·03542	12. 0	48·0	49·7
3. 14	7. 10	7. 55	·1065	9. 5	·03346	18. 0	46·1	47·0
3. 30	9. 0	8. 11	·1071	9. 54	·03480	20. 0	46·9	48·0
3. 43	8. 0	8. 15	·1064	13. 26	·03548	21. 0	47·3	49·2
4. 0	10. 35	8. 40	·1129	14. 5	·03530	22. 0	48·0	49·6
4. 15	21. 10. 30	9. 18	·1077	18. 0	·03780	23. 0	48·9	50·0
4. 38	20. 59. 10	9. 27	·1079	20. 23	·03832			
4. 50	21. 3. 0	9. 36	·1075	22. 35	·03780			
4. 54	2. 10	9. 54	·1101	23. 59	·03706			
5. 3	9. 0	10. 21	·1091					
5. 10	4. 5	10. 39	·1098					
5. 25	21. 6. 0		***					
5. 50	20. 59. 0	11. 47	·1103					
6. 10	21. 0. 0	12. 1	·1111					
6. 35	20. 50. 30	13. 13	·1099					
6. 45	53. 0	13. 58	·1116					
7. 0	57. 0	14. 27	·1105					
7. 25	55. 5	14. 35	·1109					
7. 54	59. 40	15. 29	·1105					
8. 17	52. 0	16. 21	·1113					
8. 40	35. 30	18. 21	·1111					
8. 45	49. 0	18. 43	·1115					
	(†)	19. 36	·1113					
9. 25	45. 30	20. 7	·1111					
9. 40	49. 0	20. 22	·1117					
9. 52	46. 0	20. 40	·1079					
10. 10	56. 0	21. 15	·1102					
10. 44	20. 55. 0		***					
11. 25	21. 2. 0	22. 14	·1088					
11. 40	0. 10	22. 40	·1096					
11. 54	0. 10	22. 57	·1076					
12. 7	21. 2. 0	23. 15	·1082					
12. 46	20. 59. 0	23. 25	·1077					
13. 0	21. 5. 0	23. 43	·1089					
13. 20	3. 30		(†)					
	(†)							
13. 55	21. 11. 0							
14. 35	20. 57. 30							
	***							
15. 9	21. 1. 0							
	***							
15. 55	20. 59. 30							
	***							
19. 5	21. 0. 0							
20. 15	2. 0							
20. 25	7. 5							
20. 38	5. 10							
	***							
21. 50	5. 15							
22. 15	2. 35							
22. 43	6. 0							
22. 54	5. 0							
23. 8	7. 5							
23. 36	1. 30							
23. 59	3. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 5		Dec. 5		Dec. 5		Dec. 5		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 3. 30		(†)	0. 0	·03706	0. 0	49·3	50·6
0. 46	4. 0	1. 0	·1097*	1. 7	·03625	1. 0	50·2	50·7
1. 10	7. 0	3. 0	·1074*	1. 50	·03620	2. 0	50·8	51·3
1. 25	5. 20	9. 0	·1111*	2. 50	·03548	3. 0	51·5	52·0
	***	10. 7	·1098	3. 35	·03642	9. 0	49·1	51·5
2. 0	9. 0		***	5. 6	·03690	21. 12	43·8	45·9
2. 10	6. 30	15. 25	·1109		***			
2. 23	7. 15		***	5. 45	·03618			
2. 35	6. 20	15. 50	·1107	9. 8:	·03598			
2. 45	9. 0	16. 16	·1113	14. 0	·03820			
3. 0	21. 7. 20	16. 50	·1108	23. 0:	·04332			
3. 22	20. 59. 0	17. 43	·1114	23. 30	·04330			
3. 55	21. 7. 5		***		(†)			
4. 10	6. 35	18. 42	·1117					
4. 22	8. 45		***					
4. 35	2. 30	19. 35	·1111					
4. 40	5. 0		***					
4. 48	3. 30	20. 27	·1116					
5. 0	21. 3. 30	20. 38	·1111					
5. 15	20. 37. 0	21. 0	·1115					
5. 40	21. 0. 0	21. 45	·1110					
5. 47	20. 54. 0	22. 17	·1095					
5. 53	21. 1. 40		***					
6. 7	20. 54. 25	23. 32	·1104					
6. 45	21. 2. 20		(†)					
	***							
7. 30	1. 10							
7. 45	2. 30							
7. 55	21. 1. 30							
8. 14	20. 51. 35							
8. 41	59. 0							
9. 5	58. 30							
9. 18	55. 30							
9. 36	20. 56. 0							
10. 5	21. 1. 0							
12. 40	1. 20							
13. 45	2. 10							
14. 0	1. 5							
15. 0	3. 0							
	***							
15. 50	3. 0							
16. 6	1. 15							
16. 55	2. 10							
17. 15	1. 0							
18. 17	21. 1. 35							
19. 0	20. 59. 0							
19. 40	21. 2. 0							
	***							
21. 55	1. 5							
	***							
23. 0	5. 5							
23. 59	4. 0							
Dec. 6		Dec. 6		Dec. 6		Dec. 6		
0. 0	21. 4. 0		(†)		(†)	1. 0	46·8	48·0
1. 0	7. 0	0. 47	·1099	1. 25	·04281	3. 0	49·2	50·7
2. 15:	3. 0	2. 16	·1105	2. 0:	·04298	9. 0	50·0	51·0
	***	2. 37	·1102	5. 15	·04060	21. 0	51·5	52·2
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 6		Dec. 6		Dec. 6				
h m	° ′ ″	h m		h m		h m	°	°
3. 17	21. 4. 30	3. 34	·1105	6. 17	·04030			
3. 28	3. 0	3. 42	·1098	6. 45	·03972			
3. 35	4. 5	4. 15	·1109		***			
3. 45	2. 0	4. 28	·1092	9. 50	·03067			
4. 6	2. 45	4. 46	·1105	11. 51	·03810			
4. 16	21. 6. 0	4. 56	·1112	12. 25	·03821			
4. 42	20. 57. 0	5. 13	·1093	12. 53	·03770			
4. 51	20. 58. 10	5. 36	·1111	13. 14	·03780			
5. 0	21. 4. 0	5. 47	·1095	13. 45	·03742			
5. 29	20. 59. 0	6. 3	·1106		(†)			
5. 40	21. 4. 5	6. 7	·1102	20. 55	·03925			
5. 52	0. 0	6. 18	·1151	22. 0:	·03950			
6. 0	21. 2. 30	6. 29	·1108	23. 59	·03800			
6. 15	20. 52. 0	6. 37	·1114					
6. 29	21. 9. 30	6. 43	·1099					
6. 37	21. 2. 15	6. 52	·1113					
6. 50	20. 55. 5	7. 7	·1093					
7. 1	21. 1. 35	7. 16	·1096					
	***	7. 26	·1090					
7. 30	0. 0	7. 37	·1099					
7. 40	5. 0	7. 46	·1089					
7. 45	3. 5	7. 50	·1095					
	***	8. 12	·1077					
8. 33	0. 5	8. 40	·1096					
8. 43	21. 2. 0	8. 47	·1086					
8. 58	20. 55. 5	9. 3	·1102					
9. 15	58. 10	9. 17	·1093					
9. 30	55. 0	9. 33	·1099					
9. 44	50. 0	9. 40	·1093					
9. 52	54. 45	9. 46	·1107					
10. 8	46. 35	10. 5	·1078					
10. 25	46. 30							
10. 45	51. 30	10. 37	·1089					
	***	10. 45	·1081					
11. 47	40. 0	11. 3	·1088					
12. 10	50. 0	11. 18	·1084					
12. 21	58. 25	11. 46	·1097					
12. 50	45. 10	12. 17	·1080					
	***		(†)					
13. 8	47. 35	21. 0	·1102*					
13. 30	44. 0							
13. 45	20. 45. 20							
	(†)							
20. 50	21. 0. 0							
	***							
23. 59	3. 30							
Dec. 7		Dec. 7		Dec. 7		Dec. 7		
0. 0	21. 3. 30		(†)	0. 0	·03800	1. 0	54 ·6	55 ·2
	***	1. 0	·1094*	0. 45	·03741	3. 0	56 ·2	57 ·4
1. 45	3. 35	3. 0	·1086*	1. 6	·03744	9. 6	54 ·0	54 ·0
	***	4. 16	·1092	2. 40	·03586	22. 0	50 ·5	51 ·0
2. 50	2. 25	4. 27	·1098	2. 51	·03620			
3. 8	3. 5	4. 50	·1083	3. 34	·03642			
3. 30	21. 0. 0	5. 18	·1097		(†)			
	(†)	5. 47	·1091	9. 16	·03645			
9. 0	20. 59. 0	6. 45	·1099	15. 30	·04000			
9. 10	21. 0. 0	7. 36	·1087	18. 15	·04186			
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 7		Dec. 7		Dec. 7				
h m	° ′ ″	h m		h m		h m	°	°
11. 0	20. 59. 10	7. 45	·1093	22. 0	·04305			
11. 9	21. 1. 45	7. 50	·1090	23. 59	·04348			
	(†)		***					
12. 40	21. 1. 10	9. 7	·1100					
13. 12	20. 59. 0	9. 18	·1095					
14. 50	21. 2. 0	10. 37	·1100					
16. 5	21. 0. 30	11. 5:	·1095					
	***	11. 35	·1100					
21. 8	20. 57. 40	11. 46	·1105					
	***	11. 50	·1102					
23. 15	21. 4. 0	12. 13	·1107					
23. 59	4. 0		***					
		13. 12	·1095					
			***					
		15. 46	·1103					
			***					
		19. 47	·1103					
			***					
		21. 6	·1090					
		23. 59	·1088					
Dec. 8		Dec. 8		Dec. 8		Dec. 8		
0. 0	21. 4. 0	0. 0	·1088		(†)	8. 0	51 ·7	52 ·5
	***		***	2. 50	·04340	21. 10	49 ·0	50 ·0
1. 16	4. 5	2. 27	·1102	6. 45:	·04175			
2. 0	2. 30	4. 6	·1102	9. 7	·04207			
	***	4. 9	·1116	9. 24	·04245			
4. 45	1. 0	4. 17	·1107	11. 30	·04300			
	***		***	12. 8	·04264			
8. 44	21. 2. 10	6. 16	·1113	12. 40	·04340			
9. 14	20. 52. 0		***		(†)			
9. 23	53. 0	7. 40	·1107					
9. 40	49. 30	8. 37	·1121					
11. 6:	57. 5		***					
12. 3	39. 30	9. 15	·1090					
13. 0	20. 59. 0	9. 56:	·1119					
	***	10. 35	·1101					
13. 45	21. 2. 0	10. 47	·1101					
14. 5	20. 59. 0	10. 58	·1087					
14. 45	21. 1. 50	11. 17	·1101					
15. 16	20. 59. 0	11. 23	·1096					
	***	11. 34	·1109					
16. 7	21. 2. 10	11. 37	·1101					
17. 50	20. 59. 30	12. 3	·1126					
18. 2	21. 0. 30	12. 20	·1085					
18. 30	20. 59. 20		***					
18. 43	21. 1. 0	12. 46	·1092					
	***	13. 15	·1105					
20. 30	20. 58. 0		***					
20. 55	20. 58. 0	14. 7	·1102					
	***	14. 14	·1108					
22. 0	21. 2. 25		***					
	***	15. 6	·1099					
22. 40	6. 30	15. 17	·1104					
23. 15	7. 30	16. 6	·1099					
	***		***					
23. 45	3. 0	18. 7	·1110					
	***		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 8		Dec. 8						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	21. 3. 30	20. 11	·1102					
			***					
		21. 8	·1105					
			***					
		22. 35	·1071					
			***					
		23. 47	·1099					
		23. 59	·1099					
Dec. 9		Dec. 9		Dec. 9		Dec. 9		
0. 0	21. 3. 30	0. 0	·1099		(†)	1. 0	52 ·2	52 ·4
0. 53	8. 30	1. 56	·1098	2. 45	·02260	3. 0	54 ·2	54 ·5
1. 24	4. 25	2. 31	·1096	5. 45	·02343	9. 0	54 ·2	54 ·6
2. 25	4. 0	3. 7	·1099	10. 40	·02346	21. 0	51 ·5	51 ·9
3. 8	2. 0	3. 35	·1095	11. 7	·02253			
3. 25	2. 55	4. 7	·1100	17. 40	·02480			
4. 17	21. 0. 45	4. 37	·1078	23. 59	·02806			
5. 0	20. 52. 0	4. 46	·1093					
5. 55	20. 59. 30	4. 49	·1085					
	***	5. 7	·1099					
7. 7	21. 1. 30	5. 26	·1094					
7. 36	20. 59. 0	6. 17	·1104					
8. 6	48. 10	6. 26	·1096					
8. 25	20. 52. 0	6. 40	·1099					
8. 54	21. 2. 0	7. 37	·1090					
9. 31	20. 50. 25	7. 55	·1077					
10. 35	55. 0	8. 17	·1085					
10. 45	59. 5		***					
11. 8	42. 0	9. 36	·1083					
11. 16	46. 0	9. 45	·1086					
11. 24	44. 40	9. 56	·1081					
12. 0	56. 30	10. 35	·1088					
12. 25	55. 0	10. 46	·1104					
12. 42	57. 25	11. 5	·1077					
12. 55	55. 0	11. 17	·1096					
14. 25	58. 10	11. 25	·1092					
14. 44	20. 57. 35	11. 37	·1106					
15. 15	21. 1. 0	11. 46	·1101					
15. 26	0. 10	12. 5	·1106					
15. 45	21. 2. 25	12. 20	·1098					
16. 5	20. 59. 20	12. 46	·1100					
16. 36	21. 2. 15	13. 7	·1109					
17. 0	8. 0		***					
17. 24	9. 0	14. 12	·1101					
17. 50	4. 0	14. 35	·1108					
18. 31	6. 50		***					
18. 50	3. 30	17. 10	·1109					
19. 40	5. 0	17. 25	·1114					
	***	18. 6	·1095					
20. 35	6. 35	18. 42	·1107					
21. 5	4. 45	19. 17	·1096					
21. 44	8. 20	19. 40	·1096					
22. 0	6. 25	19. 46	·1089					
	***		***					
23. 2	8. 0	20. 37	·1083					
23. 24	11. 0	20. 46	·1091					
23. 35	8. 5	21. 35	·1071					
23. 47	11. 30		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 9		Dec. 9						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	21. 8. 0	22. 17	·1077					
		22. 34	·1063					
		22. 37	·1072					
		22. 45	·1063					
			***					
		23. 27	·1064					
			(†)					
Dec. 10		Dec. 10		Dec. 10		Dec. 10		
0. 0	21. 8. 0		(†)	0. 0	·02806	1. 0	54 ·2	54 ·0
0. 10	11. 20	1. 0	·1080*	1. 0:	·02800	3. 0	55 ·7	55 ·0
1. 9	6. 0	1. 56	·1085	3. 52	·02585	9. 0	56 ·0	55 ·7
1. 15	7. 30	2. 1	·1089	5. 30	·02438	21. 0	51 ·2	51 ·6
1. 51	1. 30	2. 17	·1083	7. 22	·02375	22. 0	51 ·2	51 ·6
2. 30	7. 25	2. 55	·1089	8. 16	·02370	23. 0	51 ·2	51 ·8
	***	3. 8	·1077	11. 15	·02305			
3. 5	6. 10	3. 35	·1084	15. 15	·02380			
3. 43	0. 0	3. 40	·1076	16. 4	·02342			
3. 46	21. 1. 0	3. 46	·1085	18. 36	·02380			
3. 54	20. 57. 35	3. 58	·1083	21. 0	·02480			
4. 10	21. 0. 30	4. 3	·1074	23. 0	·02615			
4. 30	20. 53. 0	4. 15	·1080	23. 59	·02623			
4. 50	52. 30	4. 37	·1075					
5. 10	59. 40	4. 56	·1093					
5. 16	20. 58. 30		***					
6. 6	21. 2. 30	5. 45	·1079					
6. 20	21. 5. 10	6. 7	·1090					
6. 40	20. 58. 0	6. 26	·1075					
7. 0	21. 1. 0	6. 56	·1085					
7. 23	20. 54. 0	7. 17	·1068					
7. 40	21. 7. 30	7. 26	·1083					
7. 55	20. 46. 0	7. 41	·1066					
8. 10	56. 0	7. 45	·1053					
8. 20	54. 30	7. 58	·1098					
	***		***					
9. 44	55. 25	8. 20	·1079					
10. 0	58. 0		***					
10. 25	53. 0	9. 50	·1087					
10. 36	53. 40	10. 7	·1083					
10. 47	51. 30	10. 26	·1098					
11. 0	53. 45	10. 42	·1093					
11. 17	47. 30	10. 46	·1099					
11. 40	55. 30	11. 8	·1083					
11. 55	55. 0	11. 26	·1098					
12. 10	20. 58. 10	11. 50	·1081					
12. 53	21. 1. 0		***					
14. 45	20. 59. 0	15. 16	·1098					
15. 6	21. 0. 30	15. 40	·1103					
15. 30	21. 9. 0	15. 58	·1102					
16. 13	20. 58. 35	16. 17	·1096					
17. 40	21. 7. 0	17. 5	·1100					
18. 34	2. 0	17. 32	·1110					
19. 9	3. 5	17. 48	·1104					
	***	18. 17	·1106					
20. 5	3. 35	18. 46	·1094					
20. 35	2. 30		***					
20. 55	3. 10	19. 42	·1098					
	***	20. 5	·1107					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

VERTICAL FORCE.—December 9^{d}. 1^{h}. The adjustments were altered, so that the scale-reading was diminished by 14^{div}·80, or by 0·02288 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 10		Dec. 10						
h m	° ′ ″	h m		h m		h m	°	°
22. 6	21. 1. 15	21. 57	·1077					
			***					
23. 30	7. 0							
23. 59	7. 30	23. 6	·1089					
			***					
		23. 59	·1084					
Dec. 11		Dec. 11		Dec. 11		Dec. 11		
0. 0	21. 7. 30	0. 0	·1084	0. 0	·02623	0. 0	52 ·0	53 ·0
	***	1. 7	·1081	2. 0:	·02678	1. 0	53 ·0	53 ·6
1. 35	9. 55	2. 17	·1090	6. 30:	·02350	2. 0	53 ·6	54 ·3
1. 45	8. 0	2. 40	·1077	11. 30	·02460	3. 0	54 ·0	55 ·0
2. 4	7. 0	3. 0	·1082	16. 0	·02704	6. 0	54 ·5	54 ·5
2. 31	10. 30	3. 15	·1074	22. 45	·02926	9. 0	53 ·0	53 ·0
2. 55	5. 10	3. 36	·1085	23. 59	·02908	12. 0	51 ·3	52 ·1
3. 15	7. 0	4. 37	·1095			18. 0	50 ·0	50 ·8
			***					
3. 30	3. 30					21. 0	50 ·5	51 ·2
4. 9	2. 0	7. 16	·1097			22. 0	51 ·2	52 ·0
4. 44	2. 40	7. 37	·1092			23. 0	51 ·9	52 ·7
			***					
5. 15	1. 0							
6. 50	1. 30	9. 45	·1100					
			***					
7. 30	21. 1. 25							
8. 10	20. 59. 0	11. 7	·1113					
	***	11. 32	·1103					
10. 30	59. 0	11. 49	·1105					
10. 45	56. 30	12. 7	·1101					
11. 10	58. 50	16. 40	·1103					
11. 23	57. 40	19. 26	·1104					
11. 45	20. 59. 0	21. 45	·1087					
12. 53	21. 1. 0	23. 59	·1089					
13. 15	0. 0							
20. 50	0. 0							
21. 15	2. 0							
	***							
22. 36	2. 5							
23. 38	3. 45							
23. 59	2. 30							
Dec. 12		Dec. 12		Dec. 12		Dec. 12		
0. 0	21. 2. 30	0. 0	·1089	0. 0	·02908	0 0	52 ·4	53 ·2
	***		(†)	1. 53	·02880	1. 0	52 ·6	53 ·2
0. 46	2. 30	1. 0	·1091*	7. 0:	·02648	2. 0	53 ·5	53 ·8
1. 7	4. 50	2. 15	·1089	12. 30	·02640	3. 0	54 ·2	54 ·3
			***					
2. 39	4. 0			21. 0	·02760	9. 0	54 ·0	53 ·5
5. 30	21. 0. 0	5. 46	·1098	23. 30	·02766	21. 0	52 ·3	52 ·6
			***		(†)			
11. 8	20. 58. 10							
11. 32	59. 0	9. 50	·1100					
			***					
12. 24	20. 57. 0							
	***	11. 16	·1096					
			***					
15. 53	21. 0. 0							
16. 45	20. 58. 0	12. 3	·1106					
18. 16	59. 30	12. 45	·1095					
19. 5	58. 30	16. 47	·1098					
21. 20	20. 59. 0	17. 37	·1103					
23. 45	21. 4. 40	17. 46	·1100					
23. 52	7. 0	19. 6:	·1106					
			***					
23. 59	6. 0							
		21. 58	·1091					
		23. 16	·1089					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Dec. 12		h m		h m	°	°
		h m						
		23. 47	·1093					
		23. 59	·1086					
Dec. 13		Dec. 13		Dec. 13		Dec. 13		
0. 0	21. 6. 0	0. 0	·1086		(†)	1. 0	53 ·2	53 ·7
0. 8	4. 30	1. 43	·1091	0. 30	·02773	3. 0	55 ·0	54 ·7
0. 47	3. 0	2. 37	·1087	2. 0	·02760	9. 0	54 ·0	53 ·6
	***	4. 58	·1096	8. 0:	·02521	21. 0	49 ·3	50 ·2
1. 57	6. 5	6. 47	·1097	10. 15	·02520			
4. 25	21. 0. 45	7. 4	·1094	15. 10:	·02440			
7. 15	20. 59. 0	7. 20	·1099		(†)			
7. 41	55. 30	7. 42	·1095	23. 0	·02718			
8. 8	58. 0	8. 3	·1099	23. 59	·02722			
			***					
8. 45	58. 50							
9. 11	54. 10	9. 46	·1103					
9. 24	55. 0	9. 56	·1097					
			***					
9. 53	53. 15							
10. 16	56. 35	14. 15	·1102					
			***					
11. 0	20. 58. 15							
13. 30	21. 1. 5	17. 47	·1110					
			***					
17. 15	21. 1. 30							
21. 35	20. 59. 0	20. 5	·1108					
	***		***					
23. 11	21. 3. 5	21. 28	·1103					
	***	23. 59	·1100					
23. 59	2. 30							
Dec. 14		Dec. 14		Dec. 14		Dec. 14		
0. 0	21. 2. 30	0. 0	·1100	0. 0	·02722	1. 0	51 ·3	50 ·8
0. 14	3. 15	3. 35	·1098	2. 0:	·02720	3. 0	52 ·3	53 ·2
0. 30	2. 10	6. 8	·1106	7. 15:	·02362	9. 0	51 ·2	52 ·0
	***		***	9. 45	·02347	22. 30	48 ·0	49 ·8
1. 5	4. 0	13. 27	·1114	17. 0	·02440			
			***					
2. 55	3. 0			23. 10	·02576			
4. 30:	0. 0	15. 16	·1112	23. 59	·02605			
			***					
7. 7	0. 15							
11. 30	0. 0	18. 48	·1115					
14. 54	1. 10	20. 45	·1113					
19. 45	21. 0. 5	21. 30	·1103					
21. 0	20. 59. 0							
	***	23. 9	·1102					
23. 15	21. 1. 50		(†)					
	(†)							
Dec. 15		Dec. 15		Dec. 15		Dec. 15		
9. 25	20. 59. 13*	9. 25	·1105*	0. 0	·02605	9. 25	51 ·0	51 ·7
21. 0	58. 49*	21. 0	·1103*	2. 4:	·02604	21. 0	49 ·2	50 ·3
				6. 0	·02430			
				12. 0:	·02300			
				19. 15	·02383			
				23. 59	·02350			
Dec. 16		Dec. 16		Dec. 16		Dec. 16		
	(†)		(†)	0. 0	·02350	1. 0	51 ·8	52 ·2
0. 22	21. 2. 30	1. 0	·1099*	1. 51	·02287	3. 0	53 ·0	54 ·6
1. 30:	3. 55	2. 55	·1103	8. 50	·02448	9. 0	53 ·5	54 ·5
5. 15	0. 0	5. 36	·1109	13. 55	·02410	21. 0	50 ·0	50 ·8
12. 15	0. 0	9. 15	·1109	21. 45	·02645			
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 16		Dec. 16		Dec. 16				
h m	° ′ ″	h m		h m		h m	°	°
12. 28	21. 1. 30	12. 22	·1110	23. 59	·02680			
12. 57	1. 0	12. 45	·1113					
13. 17	21. 5. 0	12. 50	·1123					
13. 59	20. 59. 20	13. 0	·1112					
17. 0:	21. 2. 10	13. 16	·1120					
21. 0	21. 0. 0	13. 33	·1113					
21. 30	20. 58. 30	13. 45	·1117					
22. 0	20. 58. 5	13. 48	·1113					
23. 35	21. 2. 15		***					
23. 59	2. 30	16. 34	·1118					
		18. 47	·1123					
		20. 6	·1122					
			***					
		21. 12	·1111					
			***					
		22. 26	·1112					
			***					
		23. 34	·1105					
			***					
		23. 59	·1103					
Dec. 17		Dec. 17		Dec. 17		Dec. 17		
0. 0	21. 2. 30	0. 0	·1103	0. 0	·02680	1. 0	51 ·2	51 ·5
0. 5	3. 35		***	3. 15	·02644	3. 0	51 ·6	52 ·2
	***	2. 21	·1110	6. 20:	·02528	9. 0	50 ·0	52 ·5
0. 44	1. 10	2. 55	·1111	8. 30	·02546	21. 0	47 ·3	49 ·2
1. 9	3. 40	3. 8	·1107	10. 0:	·02530	22. 0	47 ·8	49 ·0
	***	3. 20	·1112	18. 45	·02820	23. 0	48 ·5	49 ·8
3. 25	1. 35	3. 52	·1108	23. 0	·02899			
4. 45	0. 0	4. 27	·1109	23. 30	·02904			
5. 23	1. 0	5. 15	·1119		(†)			
6. 0	3. 5	6. 4	·1105					
6. 24	0. 10	6. 26	·1089					
6. 50	3. 0	6. 45	·1095					
7. 20:	1. 50		***					
7. 52	21. 3. 45	7. 48	·1093					
8. 13	20. 59. 30	8. 9	·1075					
8. 30	21. 2. 0	8. 40	·1089					
8. 43	20. 59. 0	8. 53	·1095					
9. 15	54. 0	9. 0	·1109					
9. 22	55. 0	9. 40	·1104					
9. 41	50. 10	10. 2	·1109					
10. 0	52. 30	10. 42	·1097					
10. 20	56. 0	12. 17	·1108					
	***		***					
11. 2	56. 0	14. 42	·1113					
11. 35	59. 0		***					
12. 20	20. 58. 0	17. 30	·1119					
13. 45	21. 0. 40		***					
14. 31	20. 58. 50	20. 0	·1118					
15. 30	21. 1. 0	21. 5	·1112					
	***	21. 37	·1113					
17. 15	21. 0. 40		***					
	***	23. 21	·1093					
21. 0	20. 58. 0	23. 59	·1106					
23. 10	21. 4. 0							
23. 44	3. 0							
23. 59	4. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 18		Dec. 18		Dec. 18		Dec. 18		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 4. 10	0. 0	·1106		(†)	0. 0	49 ·2	50 ·2
0. 14	5. 30	0. 27	·1102	0. 30	·02822	1. 0	50 ·0	50 ·3
1. 0	3. 30		(†)	2. 10	·02770	2. 0	50 ·6	51 ·0
1. 39	4. 30	1. 0	·1101*	7. 15	·02436	3. 0	51 ·0	51 ·6
1. 55	2. 50	1. 37	·1086	12. 0	·02480	6. 0	51 ·1	52 ·0
	***	2. 48	·1103	14. 20	·02542	9. 0	49 ·8	50 ·7
2. 44	1. 40	4. 45	·1107	22. 30	·02960	12. 0	48 ·5	50 ·0
3. 10	3. 10	5. 6	·1104	23. 59	·02981	18. 0	41 ·3	42 ·5
4. 7	2. 20		***			21. 0	45 ·0	46 ·3
4. 45	1. 0	7. 35	·1112			22. 0	45 ·0	46 ·6
5. 8	2. 0	8. 46	·1108			23. 0	45 ·6	47 ·0
	***	9. 45	·1114					
6. 16	21. 0. 15	14. 29	·1118					
9. 0	20. 58. 10	15. 20	·1122					
10. 5	59. 15	16. 15	·1130					
10. 30	58. 5		***					
11. 15	20. 59. 0	17. 20	·1127					
11. 45	21. 1. 0	17. 47	·1132					
13. 25	1. 35	18. 36	·1133					
14. 7	4. 0	19. 12	·1114					
14. 38	3. 10		***					
15. 6	1. 50	20. 43	·1115					
15. 35	3. 10	20. 46	·1106					
16. 0	0. 20	20. 57	·1120					
16. 38	2. 10		***					
16. 58	1. 55	22. 6	·1115					
17. 25	6. 0	22. 36	·1124					
18. 25	2. 0	22. 50	·1111					
18. 45	4. 5		***					
19. 0	3. 20	23. 40	·1102					
19. 10	5. 30		***					
	***	23. 59	·1102					
19. 53	6. 0							
20. 10	4. 0							
20. 28	5. 50							
20. 45	2. 0							
20. 53	9. 0							
21. 6	6. 0							
22. 7	0. 5							
22. 30	7. 25							
22. 44	7. 25							
22. 50	5. 10							
	***							
23. 45	9. 0							
23. 59	7. 5							
Dec. 19		Dec. 19		Dec. 19		Dec. 19		
0. 0	21. 7. 0	0. 0	·1102	0. 0	·02981	0. 0	46 ·8	47 ·3
0. 14	5. 0	0. 8	·1092	3. 6	·02958	1. 0	47 ·3	48 ·2
1. 0	6. 0		***	3. 35	·02865	3. 0	48 ·0	49 ·6
2. 0	2. 0	0. 37	·1103	4. 54	·02800	9. 0	47 ·5	48 ·5
2. 50	5. 5		(†)	5. 17	·02831	21. 0	42 ·8	44 ·2
	***	1. 0	·1103*	5. 51	·02778			
3. 22	10. 0	3. 0	·1101*	6. 32	·02830			
3. 41	5. 30	9. 0	·1055*	7. 6	·02788			
3. 51	7. 0	10. 40	·1064	7. 16	·02903			
4. 15	4. 0	10. 48	·1086	7. 39	·03300			
4. 25	1. 10	11. 5	·1069		***			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 19		Dec. 19		Dec. 19				
h m	° ′ ″	h m		h m		h m	°	°
4. 49	21. 19. 0	11. 36	·1079	7. 47	·03220			
5. 4	14. 20	11. 42	·1076	7. 59	·03280			
5. 15	8. 30	11. 46	·1082	9. 0	·02875			
5. 36	3. 0	11. 56	·1070	9. 10	·02925			
5. 43	3. 55	12. 17	·1082	9. 25	·02837			
5. 52	2. 0	12. 27	·1074	10. 8	·02640			
6. 8	9. 0	12. 52	·1084	10. 24	·02630			
6. 24	4. 10		***	10. 44	·02677			
6. 32	7. 45	13. 17	·1078	14. 45	·02810			
6. 53	1. 10		***	17. 50	·03020			
	(†)	14. 16	·1087	21. 8	·03138			
7. 45	10. 0	14. 41	·1095	23. 20	·03110			
7. 55	2. 0	15. 0	·1091	23. 59	·03072			
8. 0	3. 30	15. 16	·1097					
8. 19	1. 20		***					
8. 30	21. 4. 15	16. 50	·1104					
8. 55	20. 47. 0		***					
	(†)	18. 35	·1107					
10. 30	53. 0	18. 46	·1103					
10. 50	51. 0	20. 18	·1107					
11. 10	54. 5		***					
11. 21	54. 0	23. 17	·1093					
11. 36	20. 51. 0	23. 32	·1098					
11. 58	21. 0. 0		(†)					
12. 9	20. 58. 0							
12. 28	21. 0. 5							
	***							
12. 53	0. 0							
13. 40	5. 25							
13. 51	4. 0							
14. 0	6. 0							
15. 25	3. 50							
16. 15	4. 0							
16. 24	2. 30							
	***							
17. 48	21. 3. 5							
21. 10	20. 58. 0							
22. 46	21. 2. 0							
23. 0	1. 20							
23. 6	3. 30							
23. 20	2. 0							
	(†)							
Dec. 20		Dec. 20		Dec. 20		Dec. 20		
	(†)		(†)	0. 0	·03072	1. 0	45 ·2	46 ·5
1. 0	21. 3. 0	1. 0	·1102*	3. 10	·02920	3. 0	46 ·5	47 ·2
	***	3. 0	·1099*	5. 50	·02747	9. 0	46 ·2	47 ·0
2. 25	2. 0	3. 30	·1107	7. 3	·02770	21. 0	42 ·8	45 ·0
3. 0	2. 10	4. 12	·1111	7. 20	·02692			
3. 15	5. 5	4. 30	·1092		***			
3. 35	3. 0	5. 9	·1106	8. 7	·02660			
4. 1	4. 0	5. 15	·1104	9. 9	·02728			
4. 30	3. 0	5. 34	·1108	9. 53	·02630			
4. 44	4. 5	5. 51	·1103		***			
5. 2	0. 0	6. 15	·1114	12. 5	·02614			
5. 29	4. 30	6. 51	·1088		***			
5. 54	21. 5. 10	6. 57	·1094	13. 10	·02532			
6. 15	20. 58. 30	7. 18	·1079	14. 0	·02530			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 20		Dec. 20		Dec. 20				
h m	° ′ ″	h m		h m		h m	°	°
6. 40	21. 10. 55	7. 27	·1085	16. 13	·02660			
7. 0	21. 12. 35	7. 32	·1075	23. 20	·02826			
7. 25	20. 54. 0	7. 43	·1091	23. 59	·02832			
7. 27	21. 16. 30	7. 47	·1078					
7. 53	20. 55. 20	7. 55	·1083					
8. 0	59. 0	8. 15	·1059					
8. 7	20. 55. 0	9. 15	·1077					
8. 30	21. 3. 0	9. 30	·1100					
8. 39	20. 58. 35	9. 42	·1063					
8. 52	55. 0	9. 59	·1095					
9. 18	59. 0	10. 17	·1067					
9. 40	41. 35	10. 26	·1076					
9. 46	45. 0	10. 31	·1071					
10. 0	38. 30	11. 2	·1082					
10. 16	51. 0	11. 21	·1069					
10. 36	45. 0	11. 33	·1075					
10. 59	50. 45	11. 45	·1064					
11. 17	51. 0	12. 7	·1096					
	***	12. 15	·1091					
12. 0	47. 30	12. 28	·1097					
12. 15	51. 10	12. 35	·1087					
12. 26	20. 50. 0	12. 46	·1103					
12. 58	21. 0. 5	13. 10	·1083					
13. 20	20. 50. 10	13. 31	·1101					
14. 1	58. 0	13. 38	·1097					
14. 17	52. 30	13. 58	·1105					
14. 39	20. 56. 30	14. 4	·1094					
	***	14. 17	·1103					
16. 26	21. 3. 25	14. 29	·1103					
16. 35	1. 10	14. 40	·1094					
	***	14. 57	·1103					
17. 44	1. 0	15. 51	·1095					
18. 5	3. 0	16. 9	·1099					
20. 43	21. 0. 20	16. 14	·1095					
21. 30	20. 59. 0	16. 42	·1101					
23. 8	21. 1. 0	17. 47	·1099					
23. 59	1. 45	18. 26	·1104					
		19. 12	·1101					
		19. 47	·1106					
		23. 13	·1096					
			(†)					
Dec. 21		Dec. 21		Dec. 21		Dec. 21		
0. 0	21. 1. 45		(†)	0. 0	·02832	1. 0	45 ·3	45 ·8
0. 54	3. 15	1. 0	·1103*	1. 15:	·02826	3. 0	46 ·5	47 ·3
1. 10	2. 0	3. 0	·1099*	5. 50	·02550	9. 20	46 ·0	47 ·5
3. 33	2. 5	3. 43	·1102	8. 55	·02468	22. 15	43 ·0	45 ·0
4. 15	21. 0. 10	4. 55	·1110		·03070			
5. 54	20. 59. 10		***	12. 15:	·03052			
	***	10. 1	·1107	16. 6	·03086			
7. 44	59. 25	11. 14	·1109		(†)			
8. 37	57. 0	11. 33	·1114	22. 15	·03020*			
9. 8	58. 30	11. 43	·1111					
	***		***					
11. 6	58. 0	13. 18	·1109					
11. 18	20. 56. 30	15. 22	·1113					
11. 40	21. 1. 0		(†)					
12. 28	20. 57. 20	22. 15	·1103*					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 21								
h m	° ′ ″	h m		h m		h m	°	°
13. 7	20. 58. 40							
21. 30	21. 0. 0							
23. 59	1. 5							
Dec. 22		Dec. 22		Dec. 22		Dec 22		
0. 0	21. 1. 5	0. 0	·1101	0. 0	·03040	8. 30	45 ·7	47 ·0
2. 50	21. 3. 0	2. 22	·1113	2. 0	·03042	21. 0	45 ·7	47 ·0
5. 50:	20. 59. 10	6. 12	·1117	7. 35	·02800			
7. 35	59. 30	7. 8	·1114	13. 10:	·02668			
8. 15	55. 0	7. 48	·1100	17. 30	·02700			
8. 31	57. 0	8. 45:	·1107	23. 59	·02613			
9. 30	57. 35	9. 36	·1102					
10. 8	56. 30	10. 50	·1105					
12. 6	59. 0	11. 13	·1103					
12. 25	58. 0	11. 50	·1110					
	***		***					
14. 0	59. 50	12. 53	·1108					
18. 20	59. 0	13. 58	·1111					
21. 24	20. 57. 30	14. 14	·1107					
23. 59	21. 4. 0	18. 40	·1115					
		20. 13	·1113					
		22. 17	·1100					
			(†)					
Dec. 23		Dec. 23		Dec. 23		Dec. 23		
0. 0	21. 4. 0		(†)	0. 0	·02613	1. 0	47 ·8	49 ·3
1. 30:	21. 5. 0	1. 0	·1100*	2. 30	·02486	3. 0	48 ·3	50 ·2
5. 15	20. 59. 10	3. 0	·1103*		·02743	9. 0	49 ·0	50 ·7
7. 15	21. 0. 30	7. 5	·1114	6. 0	·02490	21. 0	45 ·0	47 ·0
13. 0	20. 59. 20	9. 0	·1117	10. 0:	·02368			
20. 10	21. 1. 35	11. 35	·1114	19. 54	·02520			
21. 45	20. 59. 10	12. 34	·1117	23. 25	·02648			
23. 8	21. 2. 20	13. 25	·1115		(†)			
	***	17. 36	·1119					
23. 59	2. 0	19. 30	·1120					
		20. 42	·1118					
		21. 0	·1113					
		21. 38	·1113					
		22. 27	·1105					
		23. 6	·1103					
			(†)					
Dec. 24		Dec. 24		Dec. 24		Dec. 24		
0. 0	21. 2. 0		(†)		(†)	1. 0	47 ·3	48 ·0
0. 50	4. 0	1. 0	·1110*	0. 7	·02685	3. 0	49 ·2	50 ·0
3. 15	21. 1. 35	3. 0	·1107*	1. 53	·02650	8. 52	46 ·5	48 ·0
5. 0:	20. 59. 20	4. 33	·1110	5. 0	·02340	21. 0	40 ·0	42 ·3
7. 15	21. 0. 0		***	5. 30	·02340			
7. 35	1. 0	10. 26	·1115		·02715			
7. 45	0. 0	11. 48	·1111	7. 30:	·02625			
9. 15	21. 0. 5		***	17. 6	·03040			
10. 0	20. 58. 35	14. 26	·1116	20. 30	·02962			
	***	16. 17	·1115	23. 59	·02880			
12. 0	20. 59. 0	17. 41	·1121					
13. 30	21. 1. 0	18. 45	·1130					
14. 30	0. 40	19. 10	·1129					
	(†)	21. 19	·1108					
21. 0	0. 35*	23. 10	·1109					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 24		Dec. 24						
h m	° ′ ″	h m		h m		h m	°	°
22. 25	21. 0. 10	23. 59	·1107					
	***							
23. 59	3. 0							
Dec. 25		Dec. 25		Dec. 25		Dec. 25		
0. 0	21. 5. 10	0. 0	·1107	0. 0	·02880	9. 0	43 ·7	46 ·0
0. 34	5. 55	2. 17	·1108	1. 50	·02803	21. 0	37 ·0	40 ·2
1. 32	3. 30	2. 42	·1114	9. 0:	·02380			
2. 10	5. 0		***	13. 30	·02420			
4. 0	21. 0. 0	5. 15	·1123	21. 45	·02916			
5. 36	20. 59. 0		***	23. 59	·02948			
10. 0	21. 0. 0	9. 5	·1117					
14. 23	1. 50	12. 26	·1123					
15. 6	0. 10		***					
19. 8	21. 1. 0	14. 43	·1119					
20. 25	20. 58. 20	15. 40	·1125					
21. 7	20. 58. 10	19. 18:	·1129					
23. 30	21. 5. 0	21. 13	·1115					
	(†)	22. 32	·1116					
			(†)					
Dec. 26		Dec. 26		Dec. 26		Dec. 26		
	(†)		(†)	0. 0	·02948	1. 0	39 ·3	41 ·7
0. 45	21. 3. 20	1. 0	·1113*	2. 30:	·02906	3. 0	41 ·3	44 ·0
3. 50	21. 0. 30	1. 10	·1111	6. 45	·02478	9. 0	44 ·0	45 ·7
6. 15	20. 58. 30	2. 45	·1119	12. 0:	·02260	21. 0	37 ·8	41 ·0
9. 15	20. 59. 45	7. 2	·1123	20. 8	·02483			
17. 0	21. 0. 50	9. 26	·1120	22. 15	·02628			
20. 0	21. 0. 30	11. 18	·1122	23. 40	·02676			
21. 50:	20. 57. 30	15. 15	·1121		(†)			
23. 59	21. 2. 0	19. 17	·1128					
		20. 16	·1127					
		21. 47	·1115					
		23. 6	·1115					
			(†)					
Dec. 27		Dec. 27		Dec. 27		Dec. 27		
0. 0	21. 2. 0		(†)		(†)	1. 0	39 ·6	42 ·0
0. 45:	21. 4. 10	1. 0	·1115*	1. 0	·02719*	3. 0	40 ·6	42 ·9
4. 55	20. 59. 0	1. 42	·1119	1. 40	·02740	9. 0	43 ·0	44 ·1
	***	4. 8	·1123	4. 0:	·02700	21. 0	41 ·5	44 ·2
7. 5	21. 0. 25	4. 40	·1121	6. 45	·02542			
8. 52	20. 57. 40	5. 9	·1125	16. 0:	·02260			
11. 45	57. 0		***	22. 45	·02340			
15. 0	59. 10	7. 43	·1110	23. 59	·02318			
21. 15:	20. 58. 0		***					
23. 18	21. 3. 0	11. 52	·1115					
23. 59	2. 0	19. 20	·1122					
		20. 18	·1119					
		22. 6	·1107					
		23. 17	·1110					
			(†)					
Dec. 28		Dec. 28		Dec. 28		Dec. 28		
0. 0	21. 2. 0		(†)	0. 0	·02318	1. 0	44 ·0	44 ·5
2. 0:	3. 0	1. 0	·1112*	1. 20	·02280	3. 0	46 ·0	47 ·3
3. 55	2. 5	1. 47	·1117	3. 52	·02121	9. 0	46 ·0	47 ·0
4. 40	1. 0	3. 10	·1121	6. 45	·02150	22. 20	41 ·0	44 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 28		Dec. 28		Dec. 28				
h m	° ′ ″	h m		h m		h m	°	°
5. 45:	21. 2. 35	4. 52	·1116	7. 30	·02460			
7. 0	20. 59. 10		(†)	12. 0:	·02397			
9. 30	20. 58. 40	8. 47	·1114	18. 0	·02450			
13. 15	21. 1. 5		***	23. 6	·02597			
15. 30	20. 59. 40	12. 16	·1120	23. 59	·02623			
16. 15	21. 0. 15		***					
19. 20	20. 59. 0	16. 37	·1119					
20. 50	20. 57. 5	18. 40	·1123					
23. 59	21. 1. 45	20. 45	·1118					
		23. 2	·1100					
		23. 59	·1105					
Dec. 29		Dec. 29		Dec. 29		Dec. 29		
0. 0	21. 1. 45	0. 0	·1105	0. 0	·02623	8. 50	41 ·5	44 ·2
1. 20	3. 50	1. 50	·1111	2. 0:	·02648	21. 0	37 ·0	39 ·0
3. 30	21. 0. 0	3. 42	·1121	7. 0	·02600			
6. 0	20. 58. 30	6. 42	·1116	11. 0:	·02604			
6. 40	59. 0	7. 6	·1109	18. 24	·02865			
7. 6	56. 30		***	19. 52	{ ·02845			
8. 0	58. 0	10. 17	·1119		{ ·02920			
9. 0	57. 0		***	23. 59	·02910			
9. 30	58. 0	14. 11	·1125					
11. 30	20. 59. 45	17. 15	·1129					
13. 7	21. 1. 25	18. 50	·1127					
13. 50	21. 0. 40	22. 6	·1115					
19. 0	20. 59. 30	22. 37	·1116					
19. 25	21. 1. 0	23. 10	·1109					
19. 44	20. 59. 0		(†)					
	***							
22. 0	58. 20							
22. 30	59. 10							
	(†)							
Dec. 30		Dec. 30		Dec. 30		Dec. 30		
	(†)		(†)	0. 0	·02910	1. 0	38 ·0	39 ·8
2. 30	21. 1. 25	1. 0	·1113*	2. 45:	·02786	3. 0	40 ·0	41 ·1
5. 0	20. 58. 50	2. 2	·1123	6. 0	·02540	9. 0	41 ·6	43 ·0
8. 45	59. 0	4. 27	·1129	10. 0:	·02382	21. 0	41 ·5	43 ·1
10. 9	58. 0		***	20. 15	·02300			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 30		Dec. 30		Dec. 30				
h m	° ′ ″	h m		h m		h m	°	°
11. 40	20. 59. 30	11. 16	·1120	22. 16	·02303			
16. 47	59. 0	12. 37	·1125	23. 59	·02280			
19. 15	57. 30		***					
20. 44	58. 10	17. 12	·1127					
21. 30	57. 30		***					
22. 15	58. 0	20. 16	·1119					
	(†)	20. 47	·1112					
			***					
		22. 16	·1110					
			(†)					
		Dec. 31		Dec. 31		Dec. 31		
			(†)	0. 0	·02280	1. 0	44 ·0	45 ·2
		0. 46	·1114	1. 10	·02256	3. 0	46 ·0	46 ·5
			***	3. 15	·02136	9. 0	45 ·8	46 ·7
		3. 56	·1113	6. 51	·02180	21. 0	41 ·4	43 ·1
			***	7. 16	·02242	22. 0	41 ·0	43 ·0
		4. 48	·1115	13. 25:	·02180	23. 0	41 ·1	43 ·0
			***	22. 15	·02442			
		6. 45	·1108		(†)			
		7. 16:	·1103					
		7. 42	·1108					
		8. 13	·1103					
			***					
		9. 50	·1109					
		10. 3	·1116					
			***					
		11. 37	·1109					
		11. 50	·1116					
			***					
		14. 15	·1117					
			***					
		16. 46	·1114					
		18. 0	·1123					
			***					
		19. 20	·1125					
			***					
		21. 18	·1115					
		21. 50	·1117					
			(†)					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 31. The Declination Magnet was under adjustment.

TABLE showing the APPROXIMATE MEAN MONTHLY WESTERN DECLINATION at the ROYAL OBSERVATORY, GREENWICH, in the Years 1858, 1859, 1860, and 1861.

Months.	1858.	1859.	1860.	1861.
	° ′ ″	° ′ ″	° ′ ″	° ′ ″
January	21. 32. 47	21. 26. 27	21. 14. 38	21. 10. 47
February	32. 14	26. 48	13. 2	9. 48
March	32. 31	27. 22	14. 53	14. 5
April	32. 26	26. 16	15. 4	7. 52
May	29. 16	22. 15	17. 10	5. 0
June	27. 34	24. 1	16. 1	1. 33
July	28. 28	23. 38	15. 44	4. 54
August	27. 24	22. 34	15. 27	5. 4
September	26. 43	22. 18	12. 44	2. 50
October	25. 33	19. 57	13. 28	1. 19
November	29. 45	18. 33	12. 49	1. 3
December	28. 40	18. 23	11. 30	0. 37
Means	21. 29. 27	21. 23. 13	21. 14. 23	21. 5. 24

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

OF THE

MAGNETIC DIP.

1861.

From the beginning of the year 1861 to October 9, the observations of the Magnetic Dip were made with the instrument by Robinson used in preceding years, and described in the volume of *Greenwich Magnetical and Meteorological Observations* for 1847, and in preceding volumes. With this instrument are used four nine-inch needles, two of which, marked A and A 2, were made by Barrow, and two, marked A 1 and A 3, were made by Dent. In the tabular statement of the values of the Magnetic Dip these needles are called Barrow A and Barrow A 2, and Dent A 1 and Dent A 3.

From October 22 to the end of the year, the observations were made with a new Dip Instrument, constructed by Messrs. Troughton and Simms from plans furnished by the Astronomer Royal, and which, for distinction, is subsequently called Airy's Instrument. The following description will probably suffice to convey an idea of its peculiarities.

The form of the needles, the form of their axes, the form of the agate bearings, and the general arrangement of the relieving apparatus, are precisely the same as those in Robinson's and other needles. But the form of the observing apparatus is greatly modified, in order to secure the following objects :—

I. To obtain a microscopic view of the points of the needles, as in the instruments introduced by Dr. Lloyd and Major-General Sabine.

II. To possess at the same time the means of observing the needles while in a state of vibration.

III. To have the means of observing needles of different lengths.

IV. To give an illumination to the field of view of each microscope, directed from the side opposite to the observer's eye, so that the light may enter past the point of the needle into the object glass of the microscope, forming a black image of the needle-point in a bright field of view.

V. To give facility for observing by day or night.

With these views, the following form is given to the apparatus :—

The needle, and the bodies of the microscopes, are inclosed in a square box. The base of the box, two vertical sides, and the top, are made of gun-metal (carefully selected to insure its freedom from iron) ; but the sides parallel to the plane of vibration of the needle are of glass. Of the two glass sides, that which is next the observer is firmly fixed ; it is hereafter called "the graduated glass-plate." The other glass side can be withdrawn, to open the box, for inserting the needle, &c.

An axis, whose length is perpendicular to the plane of vibration of the needles, and is as nearly as possible in the line of the axis of the needle, supported on two bearings (of which one is cemented in a hole in the graduated glass-plate, the other being upon a horizontal bar near to the agate support of the needle-axis), carries a transverse arm, about 11 inches long, or rather two arms, projecting about $5\frac{1}{2}$ inches on each side of the axis. Each of these projecting arms has a long opening, or slot, about 1 inch wide, extending from the neighbourhood of the center-work nearly to the end of the arm. Through this opening the tube of a microscope passes, in a direction parallel to the axis of the needle, and is firmly fixed by a shoulder-bearing on one side of the arm, and a circular nut, working in a thread cut upon the microscope-tube, on the other side of the arm. The microscope can thus be fixed at any distance from the central axis, within the limits of the length of the projecting arm.

The microscope-tube thus carried is not the entire microscope, but so much as contains the object-glass and the field-glass. Upon the plane side of the field-glass (which is turned towards the object-glass), a series of parallel lines is engraved by etching with fluoric acid. The object-glass is so adjusted that the image of the needle-point is formed upon the plane side of the field-glass ; and thus the parallel lines can be used for observing the needle in a state of vibration ; and, one of them being adopted as standard, the lines can be used for reference to the graduated circle (to be mentioned). All this requires that there be an eye-glass also for the microscope.

The axis of which we have spoken is continued through the graduated glass-plate, and there it carries another transverse arm parallel to the former and generally similar to it. In each part of this slides a short eye-piece, carrying the eye-glass. Thus, reckoning from the observer's eye, there are the following parts :—

(1.) The eye-glass.

(2.) The graduated glass-plate (its graduations, however, not intervening in this part of the glass, whatever be the adjustment of the microscope).

(3.) The field-glass, on the further surface of which the parallel lines are engraved.

(4.) The object-glass.

(5.) The needle.

(6.) The removeable glass side of the box.

(7.) The illuminating reflector, to be described hereafter.

The optical part of the apparatus being thus described, we may proceed to speak of the graduated circle.

The graduations of the circle (whose diameter is about $9\frac{3}{4}$ inches) are etched on the inner surface of the graduated glass-plate. These divisions (as well as the parallel lines on the field glasses of the microscopes) are beautifully neat and regular, and are, I think, superior to any that I have seen on metal. The same piece of metal, which carries the transverse arms supporting the microscope-bodies, carries also two arms with verniers for reading their graduations. These verniers (being adapted to transmitted light) are thin plates of metal, with notches instead of lines. The reading of the verniers is very easy. The portion of the axis which is external to the graduated glass plate (towards the observer), and which has there, as already stated, two arms for carrying the microscope eye-glasses, has also two arms for carrying the lenses by which the verniers and glass-plate graduations are viewed. These four arms are the radii of a circle, which can be fixed in position by a clamp, attached to the gun-metal casing of the graduated glass-plate, and furnished with the usual slow-motion screw.

The entire system of the two arms carrying the microscope-bodies, the two arms carrying the microscope eye-glasses, the two arms carrying the verniers, and the two arms carrying the reading-glasses for the verniers, is turned rapidly by means of a button on the external side of the graduated glass-plate : or is moved slowly by means of the slow-motion screw just mentioned.

It now remains only to describe the illuminating apparatus. On the outside of the removeable glass plate, there are supports for the axis of a metallic circle turning in a plane parallel to the plane of needle-vibration. This circle has four slotted radii, and in these slots or openings there slide small frames carrying prismatic glass reflectors, each of which can turn on an axis, in the plane of the circle, but transverse to the radius. Two of these reflectors are for the purpose of sending light through the verniers, and therefore are fixed in radial distance ; the other two are for sending light past the ends of the needle through the microscopes, and therefore require adjustment on change of needle and corresponding change of position of microscopes. The circle can be turned by a small winch near the observer's hand.

The light which illuminates the whole is a gas-burner, in the line of the axis of rotation. Its rays fall upon the glass prisms, and each of these is adjusted by turning on its axis to throw the reflected light in the required direction.

The whole of the apparatus, as thus described, is planted upon a horizontal plate admitting of rotation in azimuth : the plate is graduated in azimuth, and verniers are fixed to the gun-metal tripod stand. The gas-pipe is led down the central vertical axis, and there communicates by a rotatory joint with the fixed gas-pipes.

The needles which are used with this instrument are—

B_1, a plain needle.....	each 9 inches long.
B_2, a plain needle.....	
B_3, a loaded needle with adjustible load....	
C_1, a plain needle.....	each 6 inches long.
C_2, a plain needle.....	
C_3, a loaded needle with adjustible load....	
D_1, a plain needle.....	each 3 inches long.
D_2, a plain needle.....	
D_3, a loaded needle with adjustible load....	

To change adjustments from the use of needles of one length to those of another length, it is necessary to change the positions of the microscope bodies, the microscope-eye-glasses, the microscope-reflectors (in respect of radial distance), and the same reflectors (in respect of inclination). At each observation, it is necessary to turn the circle which carries the reflectors; but this is the work of an instant.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, with ROBINSON'S DIP APPARATUS, in the Year 1861.

Day and Approximate Hour, 1861.	Needle.	Magnetic Dip.	Observer.	Day and Approximate Hour, 1861.	Needle.	Magnetic Dip.	Observer.
				d h			
January 8. 22	Barrow A 2	68. 27 ·00	T D	May 20. 1	Dent A 1	68. 19 ·50	T D
11. 23	Dent A 3	68. 26 ·25	T D	24. 0	Barrow A 2	68. 31 ·25	T D
15. 22	,, A 1	68. 18 ·00	T D	28. 0	Dent A 3	68. 27 ·75	T D
17. 0	Barrow A 2	68. 29 ·00	T D	30. 0	,, A 1	68. 18 ·75	T D
23. 1	Dent A 3	68. 28 ·00	T D				
29. 1	,, A 1	68. 19 ·50	T D	June 4. 1	Barrow A 2	68. 31 ·25	T D
30. 21	Barrow A 2	68. 28 ·50	T D	6. 1	Dent A 3	68. 22 ·50	T D
February 4. 21	Dent A 3	68. 26 ·75	T D	July 15. 1	Dent A 1	68. 14 ·50	T D
5. 22	,, A 1	68. 19 ·50	T D	15. 2	,, A 3	68. 28 ·25	T D
8. 21	Barrow A 2	68. 30 ·25	T D	23. 0	,, A 1	68. 14 ·00	T D
13. 21	Dent A 3	68. 26 ·00	T D	23. 1	Barrow A 2	68. 32 ·25	T D
19. 0	,, A 1	68. 19 ·50	T D	29. 22	Dent A 3	68. 31 ·50	T D
21. 0	Barrow A 2	68. 32 ·50	T D	29. 23	,, A 1	68. 15 ·75	T D
27. 22	Dent A 3	68. 29 ·00	T D	29. 23	Barrow A 2	68. 33 ·00	T D
March 5. 0	Barrow A	67. 58 ·00	H	August 5. 23	Dent A 3	68. 25 ·25	T D
19. 22	Dent A 1	68. 18 ·50	T D				
26. 23	Barrow A 2	68. 32 ·00	T D	September 6. 0	Dent A 1	68. 12 ·00	T D
				10. 22	Barrow A 2	68. 31 ·50	T D
April 3. 22	Dent A 3	68. 27 ·25	T D	12. 0	Dent A 3	68. 28 ·00	T D
10. 22	,, A 1	68. 19 ·50	T D	14. 1	,, A 1	68. 14 ·25	T D
17. 23	Barrow A 2	68. 32 ·25	T D	16. 22	Barrow A 2	68. 30 ·50	T D
19. 1	Dent A 3	68. 27 ·75	T D	25. 21	Dent A 3	68. 26 ·50	T D
23. 1	,, A 1	68. 20 ·25	T D	30. 22	,, A 1	68. 7 ·75	T D
25. 23	Barrow A 2	68. 33 ·25	T D				
				October 1. 23	Barrow A 2	68. 29 ·25	T D
May 3. 1	Dent A 3	68. 26 ·75	T D	9. 1	Dent A 3	68. 28 ·75	T D

The initials T D and H are those of Mr. Downs and Mr. John Howe respectively.

MONTHLY MEANS of MAGNETIC DIPS, at the ROYAL OBSERVATORY, GREENWICH, with ROBINSON'S DIP APPARATUS, in the Year 1861.

Month, 1861.	Barrow, A.	Number of Observations.	Dent, A 1.	Number of Observations.	Barrow, A 2.	Number of Observations.	Dent, A 3.	Number of Observations.
	° ′		° ′		° ′		° ′	
January.....	....	..	68. 18 ·75	2	68. 28 ·17	3	68. 27 ·13	2
February.....	....	..	68. 19 ·50	2	68. 31 ·38	2	68. 27 ·25	3
March	67. 58 ·00	1	68. 18 ·50	1	68. 32 ·00	1	....	..
April	....	..	68. 19 ·88	2	68. 32 ·75	2	68. 27 ·50	2
May.....	....	..	68. 19 ·13	2	68. 31 ·25	1	68. 27 ·25	2
June	....	..	....	..	68. 31 ·25	1	68. 22 ·50	1
July.....	....	..	68. 14 ·75	3	68. 32 ·50	2	68. 29 ·88	2
August	....	..	....	..	....	..	68. 25 ·25	1
September.....	....	..	68. 11 ·33	3	68. 31 ·00	2	68. 27 ·25	2
October	....	..	....	..	68. 29 ·25	1	68. 28 ·75	1
Mean	....	..	68. 17 ·41	15	68. 31 ·06	15	68. 26 ·97	16

For this table the monthly means have been formed without reference to the hour at which the observation was made on each day, as in preceding years no certain difference was found between observations taken at 21^h and at 3^h.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1861.

Day and Approximate Hour, 1861.	Needle.	Length of Needle.	Magnetic Dip.	Observer.	Day and Approximate Hour, 1861.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″		d h			° ′ ″	
October 21. 22	B 2	9 inches	68. 18. 36	H C	November 19. 22	B 3	9 inches	68. 17. 2	H C
22. 22	B 2	9 ,,	68. 18. 59	H C	20. 22	B 3	9 ,,	68. 16. 40	H C
23. 0	B 1	9 ,,	68. 17. 55	H C	21. 22	B 3	9 ,,	68. 21. 47	H C
23. 22	B 2	9 ,,	68. 12. 39	H C					
24. 0	B 1	9 ,,	68. 14. 24	H C	December 5. 0	C 1	6 ,,	68. 18. 56	H C
24. 22	B 2	9 ,,	68. 22. 5	H C	6. 22	C 2	6 ,,	68. 26. 36	H C
25. 0	B 1	9 ,,	68. 26. 12	H C	10. 1	C 1	6 ,,	68. 17. 8	H C
25. 22	B 2	9 ,,	68. 11. 25	H C	10. 22	C 1	6 ,,	68. 10. 31	H C
26. 0	B 1	9 ,,	68. 17. 30	H C	11. 0	C 2	6 ,,	68. 15. 23	H C
27. 22	B 1	9 ,,	68. 13. 39	H C	13. 22	C 2	6 ,,	68. 11. 55	H
28. 0	B 2	9 ,,	68. 20. 22	H C	14. 2	C 1	6 ,,	68. 10. 41	N
28. 22	B 1	9 ,,	68. 10. 9	H C	17. 23	C 1	6 ,,	68. 15. 57	H C
29. 0	B 2	9 ,,	68. 15. 0	H C	18. 0	C 2	6 ,,	68. 9. 16	N
29. 22	B 2	9 ,,	68. 20. 57	H C	19. 0	C 1	6 ,,	68. 15. 5	N
30. 0	B 1	9 ,,	68. 14. 30	H C	21. 0	C 1	6 ,,	68. 11. 38	N
30. 22	B 1	9 ,,	68. 16. 48	H C	21. 1	C 2	6 ,,	68. 16. 29	N
31. 0	B 2	9 ,,	68. 10. 8	H C	23. 0	C 2	6 ,,	68. 13. 9	H C

November 22. A damp day.

The initials H C, N, and H are those of Mr. Henry C. Criswick, Mr. W. C. Nash, and Mr. John Howe respectively.

MONTHLY MEANS of MAGNETIC DIPS, at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1861.

Month, 1861.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	B 3, 9-inch Needle.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.	C 2, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
October	68. 16. 23	8	68. 16. 41	9	....	..	....	..	....	..
November	....	..	....	..	68. 18. 29	3	....	..	....	..
December	....	..	....	..	....	..	68. 14. 17	7	68. 15. 28	6

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1861.

The Old Apparatus, which had been used many years for observation of the Deflexion of a Magnet, and which has been used through the year 1861 and to the month of February 1862, is described, and the method of computing the results is explained, in the *Greenwich Magnetical and Meteorological Observations*, 1847, Introduction, page xlv, and in the preceding Volume for 1846. The Magnet marked $\frac{D}{XX}$ (the same which was used from September 1845), has been employed to produce the deflexion of another magnet, marked $\frac{H}{23}$ (of nearly the same dimensions): and the vibrations then observed are those of $\frac{D}{XX}$.

The weight of $\frac{D}{XX}$ is 507·302 grains, or 32·873 grammes.

The length of $\frac{D}{XX}$ is 0·3025 foot, or 92·198 millimètres.

The diameter of $\frac{D}{XX}$ is 0·025 foot, or 7·620 millimètres.

Its moment of inertia, therefore, (using the English grain and foot as the units of weight and measure,) is 3·88826.

The weight of the embracing frame and mirror is 108·242 grains, or 7·014 grammes; and, on examining the distribution of this weight, it was thought probable that its moment of inertia would be nearly the same as if it were uniformly distributed over the mirror, whose horizontal length is 0·0658 foot; its moment of inertia is therefore 0·03905.

The weight of the suspending stalk with a pulley is 39·377 grains, or 2·552 grammes, and its moment of inertia (estimated as probably the same as if it had been condensed on the pulley whose diameter is 0·0233 foot), is 0·00135.

The following is the explanation of the notation used:—

m = the magnetic moment of the deflecting magnet $\frac{D}{XX}$.

X = the absolute measure of horizontal magnetic force.

K = the moment of inertia of $\frac{D}{XX}$ with its stirrup and pulley as suspended for vibration = 3·92866, using the English foot and grain as the unit of length and weight.

π = the circumference of circle to diameter 1.

T = the time of vibration in seconds of mean solar time.

Then when the natural sine of the observed deflexion (the Deflecting Magnet being in the Lateral Position) is expressed by the formula

$$\frac{a}{(\text{distance})^3} + \frac{b}{(\text{distance})^5}$$

we have for the formulæ of computation

$$\frac{m}{X} = \tfrac{1}{2}\, a$$

$$mX = \frac{\pi^2\, K}{T^2}$$

from which m and X are found.

The computation of the values of m and X has, to the year 1857, been made in reference to English measure only, using the foot and the grain as the units of length and weight; but, for comparison with foreign observations of the Absolute Intensity of Magnetism, it is desirable that X should be expressed also in reference to French measure, in terms of the millimètre and milligramme. If an English foot be supposed equal to α times the millimètre, and a grain be equal to β times the milligramme, then it is plain that, for the reduction of $\frac{m}{X}$ and mX to French measure, these must be multiplied by α^3 and $\alpha^2\beta$ respectively. Hence, X^2 must be multiplied by $\frac{\beta}{\alpha}$, and X by $\sqrt{\frac{\beta}{\alpha}}$. Assuming that the mètre is equal to 39·37079 inches, and the gramme equal to 15·432349 grains, $\log.\sqrt{\frac{\beta}{\alpha}}$ will be found to be = 9·6637805, and the factor for reducing the English values of X to French values will be 0·46108, or $\frac{1}{2\cdot1689}$. The values of X in French measure thus derived from those in English measure are given in the proper table.

The natural sine of the observed deflexion, when the Deflecting Magnet is in the Axial Position, is treated in the same manner as the former, for expressing it by the formula

$$\frac{a^1}{(\text{distance})^3} + \frac{b^1}{(\text{distance})^5}$$

but no further use is made of these deflexions.

For the determination of the Absolute Measure of Horizontal Force on those days on which vibrations, unaccompanied by Deflexions, were observed, it is assumed that the quantity m (which is peculiar to the magnet) changes at a uniform rate from one observation of deflexion to the next; and the comparison of its interpolated value with the value of mX given by the vibration determines the value of X.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, observed with the OLD APPARATUS.

Month and Day, 1861.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft. in.	°	° ′ ″	s		°	
January 26	Lateral	1. 0	52·0	8. 35. 1·46	5·966	100	46·7	N
	Axial.....			4. 30. 53·40				
	Lateral	1. 6		2. 31. 44·77				
	Axial.....			1. 17. 37·40	5·972	100	52·6	
February 26	Lateral	1. 0	47·2	8. 26. 17·51	5·953	100	40·0	N
	Axial.....			4. 27. 57·23				
	Lateral	1. 6		2. 35. 58·24				
	Axial.....			1. 21. 15·46	5·880	100	50·0	
March 14	Lateral	1. 0	50·6	8. 30. 53·49	5·939	100	41·7	N
	Axial.....			4. 29. 30·21				
	Lateral	1. 6		2. 34. 40·58				
	Axial.....			1. 16. 12·99	5·932	100	50·8	
April 12	Lateral	1. 0	61·4	8. 29. 3·65	5·960	100	58·0	N
	Axial.....			4. 30. 33·20				
	Lateral	1. 6		2. 29. 42·33				
	Axial.....			1. 16. 13·49	5·955	100	61·5	
May 14	Lateral	1. 0	64·2	8. 29. 31·68	5·944	100	60·2	N
	Axial.....			4. 28. 15·91				
	Lateral	1. 6		2. 30. 16·32				
	Axial.....			1. 16. 38·07	5·959	100	65·0	
June 13	Lateral	1. 0	76·6	8. 25. 30·66	5·990	100	74·2	N
	Lateral	1. 6		2. 28. 59·43	5·990	100	76·2	
July 17	Lateral	1. 0	70·3	8. 22. 57·52	5·913	100	67·5	N
	Lateral	1. 6		2. 29. 39·90	5·939	100	70·3	
July 29	Lateral	1. 0	70·7	8. 21. 43·20	5·966	100	70·7	N
	Lateral	1. 6		2. 29. 0·28	5·954	100	71·0	
July 31	Lateral	1. 0	70·9	8. 23. 59·93	5·951	94	69·0	N
	Lateral	1. 6		2. 31. 10·38	5·960	100	70·3	
August 2	Lateral	1. 0	78·3	8. 23. 17·81	5·978	100	75·0	N
	Lateral	1. 6		2. 31. 8·85	5·965	100	78·4	
September 10	Lateral	1. 0	68·4	8. 11. 25·62	5·970	100	64·0	N
	Lateral	1. 6		2. 27. 23·20	5·977	100	68·2	
October 8	Lateral	1. 0	71·7	8. 15. 34·52	5·981	100	66·0	N
	Lateral	1. 6		2. 26. 40·58	5·979	100	73·1	

The lengths of 1 foot and 1 foot 6 inches answer to 304·8 and 457·2 millimètres respectively.

The initial N is that of Mr. W. C. Nash.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, observed with the OLD APPARATUS—*concluded*.

Month and Day, 1861.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft. in.	°	° ′ ″	s		°	
October 17	Lateral	1. 0	59·3	8. 21. 50·69	5·988	100	58·0	N
	Lateral	1. 6		2. 27. 0·28	6·000	100	58·4	
November 7	Lateral	1. 0	50·2	8. 19. 40·05	5·965	100	46·5	N
	Lateral	1. 6		2. 28. 58·93	5·972	100	48·6	
December 3	Lateral	1. 0	44·9	8. 20. 57·55	5·984	100	43·8	N
	Lateral	1. 6		2. 30. 1·66	5·953	100	44·0	
December 24	Lateral	1. 0	42·8	8. 22. 38·29	5·945	100	41·0	N
	Lateral	1. 6		2. 30. 9·25	5·975	100	42·0	

The lengths of 1 foot and 1 foot 6 inches answer to 304·8 and 457·2 millimètres respectively.

The initial N is that of Mr. W. C. Nash.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, with the OLD APPARATUS.

Month and Day, 1861.	In English Measure. Apparent Value of a.	Apparent Value of b.	Apparent Value of a^1.	Apparent Value of b^1.	Adopted Value of a, assuming the Value of b + 0·00064 to June 13, and − 0·00259 from July 17.	Log. $\frac{1}{2}a = \text{Log.}\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. $m\,X$.	Value of X.	Value of m.	Value of X in French Measure.
January 26	+0·14867	+0·00059	0·07418	0·00454	+0·14863	8·87107	5·969	0·03674	3·827	0·2844	1·764
February 26	+0·15814	−0·01140	0·08129	−0·00342	+0·14763	8·86813	5·917	0·04434	3·874	0·2859	1·786
March 14	+0·15478	−0·00671	0·07202	0·00630	+0·14837	8·87030	5·936	0·04155	3·852	0·2857	1·776
April 12	+0·14644	+0·00110	0·08572	−0·02451	+0·14684	8·86581	5·958	0·03834	3·857	0·2832	1·778
May 14	+0·14733	+0·00035	0·07305	0·00491	+0·14708	8·86651	5·952	0·03921	3·858	0·2837	1·779
June 13	+0·14600	+0·00052	...	...	+0·14590	8·86302	5·990	0·03769	3·849	0·2808	1·775
July 17	+0·14777	−0·00198	...	...	+0·14830	8·87011	5·926	0·04302	3·859	0·2861	1·779
29	+0·14689	−0·00146	...	...	+0·14788	8·86887	5·960	0·03805	3·842	0·2841	1·772
31	+0·15019	−0·00411	...	...	+0·14886	8·87176	5·955	0·03878	3·833	0·2853	1·767
August 2	+0·15031	−0·00443	...	...	+0·14870	8·87129	5·972	0·03630	3·824	0·2843	1·763
September 10	+0·14641	−0·00395	...	...	+0·14522	8·86100	5·974	0·03608	3·868	0·2809	1·784
October 8	+0·14419	−0·00053	...	...	+0·14599	8·86328	5·980	0·03514	3·854	0·2813	1·777
17	+0·14333	+0·00213	...	...	+0·14745	8·86762	5·994	0·03311	3·826	0·2821	1·764
November 7	+0·14732	−0·00248	...	...	+0·14741	8·86751	5·968	0·03688	3·843	0·2833	1·772
December 3	+0·14887	−0·00366	...	...	+0·14794	8·86905	5·969	0·03674	3·836	0·2837	1·769
24	+0·14870	−0·00301	...	...	+0·14833	8·87020	5·960	0·03805	3·836	0·2845	1·769

The value of b employed in the reductions from January to June, namely +0·00064, is the mean of the apparent values of b from the observations taken between those times, (rejecting the discordant results of February and March); and that used in the reductions from July 17 to the end of the year, namely −0·00259, is the mean from the observations taken between 1861, July 17, and 1862, February 3, when the series with the old apparatus ended.

VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS of VIBRATION of the DEFLECTING MAGNET $\frac{D}{XX'}$ unaccompanied by DEFLEXION.

Month and Day, 1861.	Adopted Time of Vibration.	Temperature.	Log. $m\,X$ in English Measure.	Value of m interpolated from the Deflexion Observations. In English Measure.	Inferred Value of X in English Measure.	Value of X in French Measure.	Observer.
	s						
January 18	5·945	35·5	0·04024	0·2841	3·862	1·781	H
24	5·941	43·7	0·04082	0·2843	3·864	1·782	N
March 27	5·952	55·0	0·03921	0·2845	3·847	1·774	H
April 17	5·946	55·6	0·04009	0·2833	3·872	1·785	H
30	5·943	56·0	0·04053	0·2835	3·873	1·786	H
May 13	5·950	47·8	0·03951	0·2837	3·861	1·780	H
22	5·960	64·3	0·03805	0·2829	3·858	1·779	N
July 27	5·978	69·2	0·03543	0·2844	3·815	1·759	N
September 30	5·961	74·8	0·03790	0·2812	3·881	1·789	N
October 3	5·982	69·3	0·03485	0·2812	3·853	1·777	N
December 11	5·936	42·5	0·04155	0·2840	3·875	1·787	N

The number of vibrations employed in each determination was 100.

The initials N and H are those of Mr. W. C. Nash and Mr. John Howe.

It will be remarked that, as no correction has been applied for temperature, the result is affected with a slight error, unless the temperature in these vibration-observations coincide with the temperature interpolated between the deflexion-observations.

In the spring of 1861, a Unifilar Instrument, similar in all respects (as is understood) to those used in and issued by the Kew Observatory, was procured by the courteous application of Major-General Sabine, from the makers, Messrs. J. T. Gibson and Son; and after having been subjected to the usual examinations, at the Kew Observatory, for determination of its constants (for which I am indebted to the kindness of Balfour Stewart, Esq.), was mounted at the Royal Observatory. Observations with this instrument commenced on June 11, and were continued through the year; and, after some slight modifications of its verniers, it is still maintained in use (1862).

The method of making observations with this instrument differs in no respect from that used with the Old Instrument. In the reduction of the observations, the precepts contained in the Skeleton Form prepared by the Kew Observatory Committee have received the strictest attention.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, made with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1861.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft.	°	° ′ ″	s		°	
June 11	Lateral	1·0	69·8	17. 5. 14	4·630	50	67·0	H C
	Lateral	1·3		7. 40. 2				
June 14	Lateral	1·0	78·2	16. 59. 11	4·625	150	75·0	H C
	Lateral	1·3		7. 38. 39	4·623	150	79·0	
July 18	Lateral	1·0	65·7	16. 50. 13	4·663	150	67·1	H C
	Lateral	1·3		7. 34. 59				
July 20	Lateral	1·0	67·1	16. 49. 34	4·660	150	66·5	H C
	Lateral	1·3		7. 34. 33	4·662	150	69·5	
August 1	Lateral	1·0	68·3	16. 45. 36	4·667	150	66·0	H C
	Lateral	1·3		7. 33. 3	4·672	150		
August 3	Lateral	1·0	61·9	16. 45. 1	4·673	150	62·1	H C
	Lateral	1·3		7. 32. 35	4·680	150		
October 10	Lateral	1·0	61·5	16. 19. 31	4·696	150	65·5	H C
	Lateral	1·3		7. 20. 50				
October 15	Lateral	1·0	65·5	16. 21. 25	4·725	150	64·2	H C
	Lateral	1·3		7. 21. 58				
November 11	Lateral	1·0	46·3	16. 14. 47	4·746	150	44·0	H C
	Lateral	1·3		7. 19. 46	4·740	150	50·0	
December 2	Lateral	1·0	34·2	16. 12. 22	4·747	150	32·0	H C
	Lateral	1·3		7. 17. 51	4·745	150	40·0	

The lengths of 1 foot and 1·3 foot answer to 304·8 and 396·2 millimètres respectively.
The initials H C are those of Mr. Henry Criswick.
In the following calculations, every observation is reduced to the temperature 35°.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1861.		In English Measure. Apparent Value of A.	Apparent Value of A^1.	Apparent Value of P.	Mean Value of P.	Log. $\frac{1}{2}$ A − Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. m X.	Value of X.	Value of m.	Value of X in French Measure.
							s				
June	11	+0·14777	0·08722	+0·00617		9·16922	4·630	0·33030	3·807	0·5619	1·756
	14	+0·14715	0·08709	−0·00050		9·16798	4·624	0·32980	3·810	0·5609	1·757
July	18	+0·14556	0·08620	−0·00219		9·16340	4·663	0·32414	3·805	0·5542	1·755
	20	+0·14551	0·08614	−0·00135		9·16317	4·661	0·32466	3·809	0·5544	1·756
August	1	+0·14498	0·08588	−0·00271	−0·00049	9·16172	4·670	0·32275	3·806	0·5523	1·755
	3	+0·14474	0·08570	−0·00153		9·16090	4·677	0·32119	3·803	0·5508	1·754
October	10	+0·14116	0·08348	+0·00139		9·14976	4·696	0·31791	3·838	0·5417	1·770
	15	+0·14152	0·08375	−0·00035		9·15102	4·725	0·31248	3·808	0·5391	1·756
November	11	+0·14013	0·08306	−0·00421		9·14707	4·743	0·30800	3·806	0·5339	1·755
December	2	+0·13952	0·08254	+0·00035		9·14477	4·746	0·30674	3·811	0·5317	1·757

VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS of VIBRATIONS of the DEFLECTING MAGNET 3 W., unaccompanied by DEFLEXION.

Month and Day, 1861.		Adopted Time of Vibration.	Temperature.	Log. m X in English Measure.	Value of m interpolated from the Deflexion Observations. In English Measure.	Inferred Value of X in English Measure.	Value of X in French Measure.	Observer.
		s	°					
June	18	4·639	75·2	0·32920	0·5600	3·811	1·757	H C
	20	4·639	74·1	0·32912	0·5598	3·812	1·757	H C
July	31	4·666	73·5	0·32404	0·5525	3·817	1·760	H C
September	11	4·700	62·8	0·31699	0·5456	3·803	1·754	H C

The number of vibrations employed in each determination was 150.
The initials H C are those of Mr. Henry Criswick.
Every observation is reduced to the temperature 35°.

As observations were carried on with both instruments from 1861, June 11, to 1862, February 3, it has been judged desirable to exhibit here a comparison of the results. Although the observations were not taken on the same days, yet it is conceived that the difference of the means of the results may with safety be adopted as representing the true difference depending on the peculiarities of each instrument and the peculiarities of each mode of reduction. And, as the observations made with the Old Instrument were conducted precisely in the same way as for many years past, and those with the Kew Unifilar in the way which will probably be continued in future, it is presumed that this comparison will give the means of forming one continuous series commencing with the year 1848.

Taking then the means from the following Table, we have—

Mean of determinations by Old Instrument ..... 3·844

Mean of determinations by Kew Unifilar ..... 3·811

The determinations with the Old Instrument ought therefore to be diminished by $\frac{1}{117}$ part, to make them comparable with those of the Kew Unifilar.

COMPARISON of RESULTS from the TWO DEFLEXION INSTRUMENTS.

Month and Day, 1861–62.		Value of X in English Measure.		Value of X in French Measure.	
		From Old Instrument.	From Kew Unifilar.	From Old Instrument.	From Kew Unifilar.
1861					
June	11	...	3·807	...	1·756
	13	3·849	...	1·775	...
	14	...	3·810	...	1·757
July	17	3·859	...	1·779	...
	18	...	3·803	...	1·755
	20	...	3·809	...	1·756
	29	3·842	...	1·772	...
	31	3·833	...	1·767	...
August	1	...	3·806	...	1·755
	2	3·824	...	1·763	...
	3	...	3·803	...	1·754
September	10	3·868	...	1·784	...
October	8	3·854	...	1·777	...
	10	...	3·838	...	1·770
	15	...	3·808	...	1·756
	17	3·826	...	1·764	...
November	7	3·843	...	1·772	...
	11	...	3·806	...	1·755
December	2	...	3·811	...	1·757
	3	3·836	...	1·769	...
	24	3·836	...	1·769	...
1862.					
January	29	...	3·817	...	1·760
	30	3·838	...	1·770	...
	30	...	3·814	...	1·758
	31	3·846	...	1·773	...
February	1	...	3·810	...	1·757
	3	3·867	...	1·783	...

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1861.

The day in the first column of the following tables is to be understood, generally, as defined in civil reckoning.

The barometer is described in the *Greenwich Magnetical and Meteorological Observations*, 1847, Introduction, page xlviii, and in the corresponding parts of several preceding volumes. The barometer has been read at 21^h, 0^h, 3^h, 9^h (Astronomical), on every day, excepting on Sundays, and on Good Friday and Christmas Day, on which days fewer observations have been taken. Every reading has been reduced to the reading which would have been obtained at the temperature 32° of the mercury and scale, by application of the correction given in table II. (pages 82 to 87) of the Report of the Committee of Physics of the Royal Society. The mean of the reduced readings has then been taken for each civil day, and finally converted into mean daily reading, by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, part I.

The positions of all the thermometers are described in the Introduction, 1847, page lxix.

The thermometers, used for determining the highest temperature of the air, and the highest state of the wet-bulb thermometer, are mercurial thermometers invented by Messrs. Negretti and Zambra, and described in the *Results of Meteorological Observations*, 1851, Introduction page xcvi; and those for the lowest are of Rutherford's construction, described in the Introduction, 1847, page lxvii: they are self-registering. The readings given are corrected for index-errors.

The dry-bulb and wet-bulb thermometers are described in the Introduction, 1847, page xlix; their scales have been verified from time to time, in the manner there described.

A mean daily reading of the dry-bulb thermometer is inferred from the mean of observations taken at the same hours as the observations of the barometer, corrected by a quantity given in the *Phil. Trans.*, 1848, part I. Another mean daily reading is inferred from the mean of the maximum and minimum thermometers, also corrected by a small quantity given in the same paper. The mean daily value given in the tables is found by combining these two corrected means giving them weights proportional to the number of observations from which they are respectively derived.

The dew-point has been inferred exclusively from simultaneous observations of the dry-bulb and wet-bulb thermometers. In order to find the difference between the dry-bulb reading and the dew-point, the difference between the dry-bulb and the wet-bulb readings has been multiplied by a factor taken from the following table (deduced by Mr. Glaisher from the comparison of all the simultaneous readings of the dry-bulb, wet-bulb, and dew-point thermometers, from the year 1840 to the end of the year 1854).

TABLE OF FACTORS, BY WHICH THE DIFFERENCE OF READINGS OF THE DRY-BULB AND WET-BULB THERMOMETERS IS TO BE MULTIPLIED, IN ORDER TO PRODUCE THE DIFFERENCE BETWEEN THE READINGS OF THE DRY-BULB AND DEW-POINT THERMOMETERS.

Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.
°		°		°		°		°		°	
20	8·1	32	3·3	44	2·2	56	2·0	68	1·8	80	1·7
21	7·9	33	3·0	45	2·2	57	1·9	69	1·8	81	1·7
22	7·6	34	2·8	46	2·1	58	1·9	70	1·8	82	1·7
23	7·3	35	2·6	47	2·1	59	1·9	71	1·8	83	1·7
24	6·9	36	2·5	48	2·1	60	1·9	72	1·8	84	1·7
25	6·5	37	2·4	49	2·1	61	1·9	73	1·8	85	1·7
26	6·1	38	2·4	50	2·1	62	1·9	74	1·7	86	1·7
27	5·6	39	2·3	51	2·0	63	1·9	75	1·7	87	1·6
28	5·1	40	2·3	52	2·0	64	1·9	76	1·7	88	1·6
29	4·6	41	2·3	53	2·0	65	1·8	77	1·7	89	1·6
30	4·2	42	2·2	54	2·0	66	1·8	78	1·7	90	1·6
31	3·7	43	2·2	55	2·0	67	1·8	79	1·7		

The dew-point being thus found for each individual observation, the mean is taken for each day (as defined from midnight to midnight), and this mean is corrected by application of the elements in the *Phil. Trans.*, 1848, part I.

The thermometers exhibiting the lowest temperature on the grass, and the highest and lowest temperatures of the water of the Thames, are described in the Introduction, 1847, pages lxix and lxxi. They are occasionally verified. They are read at 21^h (9^h A.M.) every day; their readings are placed opposite to the day preceding the civil day on which the scales are actually read. The thermometer for the highest temperature in the sunshine is a mercurial thermometer with blackened bulb, of Negretti and Zambra's construction: it is read at 9^h P.M. every evening.

The thermometer for the minimum temperature on the grass was out of order on March 24; July 7; August 8, 11, 17; December 19.

The thermometer for the maximum temperature in the water of the Thames was out of order from February 10 to 16; on April 6; April 28 to May 11; September 15 to 23; December 13 to 31. That for the minimum temperature was out of order on the same days, and also on February 24.

The mean daily value of the difference between dew-point temperature and air-temperature is the difference between the two numbers in the sixth and seventh columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, or they are found from the absolute maxima and minima, as determined by comparing the observations of the self-registering wet-bulb thermometers with those of the self-registering dry-bulb thermometers.

The difference between the mean temperature for the day and the mean for the same day of the year on an average of forty-three years, is found by comparison with a table of results deduced by Mr. Glaisher from forty-three years' observations, made at the Royal Observatory, ending 1856.

Osler's Anemometer is described in the Introduction, 1847, page lxxi. Little explanation of the results deduced from it appears to be necessary. It may be understood generally that the greatest pressure occurred in gusts of short duration.

Whewell's Anemometer is described in the Introduction, 1847, page lxxii. The amount of movement of air here exhibited is to be understood as from 22^h to 22^h (10^h A.M. to 10^h A.M.), the numbers being placed opposite to the day preceding the civil day on which the instrument is read.

Robinson's Anemometer is described in the Introduction 1859, page cxli. The instrument is read off every day at 22^h (10^h A.M.)

The register of rain is read at 9^h P.M. from the Cylinder Rain-gauge partly sunk in the ground, described in page lxxv of the Introduction, 1847. If, however, there appears to be any doubt as to the correctness of the results, reference is made to a Rain-gauge of similar construction and placed near to it, and to a second of the same construction placed 10 feet above the ground.

For understanding the divisions of time under the heads of Electricity and Weather, the following remarks are necessary :—The day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is roughly subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the remarks before it apply (roughly) to the interval from midnight to 6 A.M., and those following it to the interval from 6 A.M. to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column.

The Electrical Apparatus is described in page lxxvii of the Introduction, 1847. The following is the explanation of the notation employed, it being premised that the quality of the Electricity is always to be supposed positive when no indication of quality is given :—

g cur. denotes *galvanic currents*	N denotes *negative*	s denotes *strong*	v denotes *variable*
m .. *moderate*	P .. *positive*	sp .. *sparks*	w .. *weak*

The duplication of the letter denotes an intensity of the modification described : thus, s s is very strong ; v v, very variable.

The Clouds and Weather are described generally by Howard's Nomenclature ; the figure denotes the proportion of sky covered by clouds, the whole sky being represented by 10. The notation is as follows :—

a denotes *aurora borealis*	hl denotes *hail*	shs-r denotes *showers of rain*	h-sqs denotes *heavy squalls*
ci .. *cirrus*	so-ha .. *solar halo*	c-r .. *continued rain*	fr-h-sqs .. *frequent heavy squalls*
ci-cu .. *cirro-cumulus*	l .. *lightning*	c-h-r .. *continued heavy rain*	sc .. *scud*
ci-s .. *cirro-stratus*	li-cl .. *light clouds*	m-r .. *misty rain*	li-sc .. *light scud*
cu .. *cumulus*	lu-co .. *lunar corona*	fr-m-r .. *frequent misty rain*	sl .. *sleet*
cu-s .. *cumulo-stratus*	lu-ha .. *lunar halo*	sl-r .. *slight rain*	sn .. *snow*
d .. *dew*	m .. *meteor*	h-shs .. *heavy showers*	sl-sn .. *slight snow*
h-d .. *heavy dew*	ms .. *meteors*	fr-shs .. *frequent showers*	s .. *stratus*
f .. *fog*	n .. *nimbus*	fr-h-shs .. *frequent heavy showers*	t .. *thunder*
th-f .. *thick-fog*	r .. *rain*	li-shs .. *light showers*	t-s .. *thunder storm*
fr .. *frost*	th-r .. *thin rain*	oc-shs .. *occasional showers*	v .. *variable*
gt-glm *great gloom*	oc-r .. *occasional rain*	sq .. *squall*	w .. *wind*
h-fr .. *hoar frost*	fr-r .. *frozen rain*	sqs .. *squalls*	st-w .. *strong wind*
h .. *haze*	h-r .. *heavy rain*	fr-sqs .. *frequent squalls*	

The foot-notes show the means and extremes of readings, and their departure in each month from average values, as found from the preceding Twenty Years' Observations ; those relating to Humidity have been calculated from the Second Edition of Glaisher's Hygrometrical Tables.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whitwell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Jan. 1	..	29·228	47·3	31·9	38·2	37·8	49·0	33·2	35·0	34·0	0·4	2·0	0·0	+ 1·7	SW	NE	5·0	0·0	1·8	101	296	0·29
2	Perigee; In Equator.	29·918	33·2	26·0	29·0	20·9	45·0	22·0	34·0	33·0	8·1	10·3	6·7	— 7·4	NE	NE	5·0	0·0	1·0	45	199	0·00
3	..	30·143	34·3	24·4	28·7	21·3	45·3	16·0	34·0	33·0	7·4	8·4	6·7	— 7·7	NE	NE	0·0	0·0	0·0	2	14	0·00
4	Last Qr.	29·983	34·2	20·5	28·0	24·7	37·0	10·0	33·0	32·0	3·3	7·5	2·5	— 8·3	NE	NE	0·0	0·0	0·0	..	39	0·00
5	..	29·928	33·0	22·3	27·5	25·1	36·0	22·5	33·5	32·5	2·4	5·5	1·4	— 8·6	NE	SE	1·0	0·0	0·0	1	98	0·02
6	..	29·932	29·8	19·5	23·6	17·9	46·0	8·5	33·0	32·0	5·7	6·0	4·6	—12·4	SE; NE	N	3·0	0·0	0·3	55	236	0·00
7	..	29·966	32·5	20·5	26·4	19·2	41·5	10·0	33·0	32·0	7·2	9·9	3·9	— 9·4	W	NW; NE	0·0	0·0	0·0	15	77	0·00
8	Greatest Declination S.	30·182	34·8	16·0	24·5	17·3	70·0	9·0	32·5	31·5	7·2	10·3	5·2	—11·0	NE	S	1·0	0·0	0·0	15	54	0·00
9	..	30·179	35·0	16·8	25·0	12·9	72·0	4·0	32·0	31·0	12·1	18·9	6·7	—10·4	S	SE	0·0	0·0	0·0	1	19	0·00
10	..	30·204	29·8	17·0	21·7	18·9	31·0	10·2	32·0	31·0	2·8	3·6	1·7	—14·0	SE	SE	0·0	0·0	0·0	..	..	0·00
11	New	30·180	37·0	17·3	28·7	24·3	42·0	6·4	32·0	31·0	4·4	6·7	1·1	— 6·9	SE	SW	0·0	0·0	0·0	1	Frost.	0·00
12	..	29·953	37·7	32·0	34·8	32·1	1·6	25·0	32·5	31·5	2·7	4·8	1·8	— 0·8	SW	SW	0·0	0·0	0·0	45	168	0·02
13	..	29·596	34·6	28·0	31·0	29·3	39·5	29·0	32·5	31·5	1·7	3·2	0·6	— 4·6	SW	SE	0·0	0·0	0·0	2	9	0·11
14	..	29·636	31·8	24·2	28·0	24·6	49·0	16·0	32·0	31·0	3·4	4·8	3·0	— 7·6	SE	E	3·5	0·0	0·3	95	260	0·00
15	In Equator	29·921	29·7	26·3	27·6	21·5	37·8	18·6	32·0	31·0	6·1	6·7	5·5	— 7·9	E	E	9·0	1·0	3·0	120	363	0·00
16	..	30·048	31·0	23·1	26·9	20·2	55·0	19·6	32·0	31·0	6·7	9·7	2·0	— 8·6	NE	NE	4·0	0·0	0·3	30	134	0·00
17	Apogee	30·134	37·0	30·3	33·5	30·6	43·0	23·0	32·0	31·0	2·9	4·3	1·5	— 2·4	NE	NE	0·0	0·0	0·0	5	43	0·01
18	..	30·129	36·3	30·2	32·9	28·9	42·0	18·5	32·5	31·5	4·0	5·8	2·2	— 3·4	NE	NE	0·0	0·0	0·0	..	41	0·00
19	First Qr.	30·088	36·2	32·0	33·8	28·8	41·0	25·0	32·0	31·5	5·0	5·7	3·9	— 2·7	NE	SW	0·0	0·0	0·0	80	232	0·00
20	..	30·221	43·9	34·6	39·5	39·3	50·3	31·6	34·0	33·0	0·2	0·4	0·0	+ 2·7	SW	SW	0·0	0·0	0·0	30	138	0·00
21	..	30·328	43·0	37·0	39·9	39·0	48·0	35·0	35·0	34·0	0·9	3·1	0·0	+ 2·8	SW	SW	3·5	0·0	0·2	135	322	0·00
22	..	30·230	39·8	32·5	35·6	34·9	49·0	18·0	35·0	34·0	0·7	1·2	0·3	— 1·7	SW	SW	2·5	0·0	0·1	70	221	0·00
23	Greatest Declination N.	30·086	39·0	33·3	36·3	35·8	42·0	31·5	36·0	35·0	0·5	1·0	0·0	— 1·2	SW	SW	0·0	0·0	0·0	20	138	0·06
24	..	29·896	47·6	31·7	40·6	37·4	65·0	24·2	37·0	36·0	3·2	8·1	1·3	+ 2·8	S	SW	4·0	0·0	0·2	105	366	0·00
25	..	29·790	53·0	42·6	48·5	45·1	62·0	32·0	37·0	36·0	3·4	8·2	1·3	+10·5	SW	SW	10·0	0·0	4·0	240	507	0·00
26	Full	30·160	52·9	42·5	46·8	43·7	80·0	35·0	38·0	37·0	3·1	9·0	1·3	+ 8·5	W	SW	11·0	0·0	1·5	120	282	0·04
27	..	30·124	55·0	42·7	47·1	44·5	85·0	36·0	39·0	38·0	2·6	7·6	0·4	+ 8·8	SW	SW	5·0	0·0	0·4	95	227	0·00
28	..	30·107	49·8	35·4	41·7	39·9	76·0	35·5	40·0	39·0	1·8	7·4	0·7	+ 3·6	SW	SW	1·0	0·0	0·0	15	69	0·00
29	Perigee; In Equator.	30·006	55·0	29·5	40·6	38·5	93·0	23·7	41·0	40·0	2·1	10·8	1·0	+ 2·7	SW	SW	0·0	0·0	0·0	2	74	0·00
30	..	30·016	44·0	31·5	37·8	37·5	45·0	25·0	42·0	41·0	0·3	3·5	0·0	+ 0·2	SW	SW	2·5	0·0	0·1	50	208	0·00
31	..	30·029	51·0	38·5	43·8	39·2	88·0	32·0	42·0	41·0	4·6	11·4	1·2	+ 6·5	SW	SSW	3·5	0·0	0·3	25	223	0·00
Means	..	30·011	39·6	28·7	33·8	30·0	53·1	22·1	34·8	33·8	3·8	6·6	2·2	— 2·8	...	...	..	..	..	Sum 1520	Sum 5147	Sum 0·55

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute minimum in the month was 29in·000 on the 1st.
The first maximum in the month was 30in·166 on the 3rd; the second minimum ,, was 29in·901 on the 5th.
The second maximum ,, was 30in·224 on the 10th; the third minimum ,, was 29in·569 on the 13th.
The absolute maximum ,, was 30in·343 on the 21st; the fourth minimum ,, was 29in·768 on the 25th.
The fourth maximum ,, was 30in·217 on the 26th; the fifth minimum ,, was 29in·962 on the 29th.
The range in the month was 1in·343.
The mean for the month was 30in·011, being 0in·254 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 55°·0 on the 27th and 29th; the lowest was 16°·0 on the 8th; and the range in the month was 39°·0.
The mean ,, of all the highest daily readings was 39°·6, being 3°·6 *lower* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 28°·7, being 5°·0 *lower* than the average of the preceding 20 years.
The mean daily range was 10°·9, being 1°·3 *greater* than the average of the preceding 20 years.
The mean for the month was 33°·8, being 4°·5 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Jan. 1	s N	s : o	10, r	10, gt.-glm, m.-r
2	o	o	o	o
3	v	v	7, ci.-cu, ci.-s	7, ci.-cu, ci.-s : o
4	v	v	10, f : o, h	o, h : 7, ci.-cu, ci.-s, sn : 10, ci.-s
5	m	s	10, sl	10, sn : o
6	v	v : s, sps	o : 5, cu, ci.-cu, ci, sn	7, cu, ci.-cu, ci : 5, s, f
7	w	w	10, ci.-s, f	10, ci.-s, h
8	o	w	o	o
9	m	m : s	o	o
10	s	s	8, cu, ci.-cu, ci, f	8, cu, ci.-cu, ci : 10, th.-f
11	s	s : ss, sps	10, s, ci.-s, f	10, s, ci.-s : 7, ci.-s : o
12	o	o	10, cu.-s, ci.-s	10, cu.-s, ci.-s : 10, th.-r
13	m	m	10, sl, r : sn	10, sn : 10
14	o	w : o	10 : 7, ci.-s, ci	7, ci.-s, ci : 10
15	o	v	o : 10, ci.-cu, cu.-s, ci.-s.	10, cu.-s, ci.-s
16	m	m : s	10, ci.-cu, ci.-s	1, ci : 5, ci.-cu, ci : 10, sn
17	o	o	10	10
18	v	v	10, f	10
19	w	o	10	10 : 10, s, ci.-s
20	o	o	10	10 : 10, th.-f
21	w	o	10	10 : o
22	o	o : s	10, f	10 : f
23	v	v	10	10 : oc.-r
24	o	o	7, s, ci.-s, h-fr	7, ci.-s, ci : 10, oc.-r
25	o	m : o	10, ci.-s, s	10, oc.-r
26	s	s	10 : o	o : 7
27	o	m	3, ci, li.-cl	3, ci
28	s	w	7, ci.-s, ci	7, ci.-cu, ci.-s : o, f
29	o	o : m	10, th.-f	o, f : o
30	s	w	10, f	10, f : 10, oc.-r
31	w	w	3, ci.-cu, ci.-s : o	o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 49°·0 on the 25th; and the lowest was 3°·8 on the 9th.
The mean ,, was 30°·0, being 5°·4 *lower* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot167$, being $0^{in}\cdot038$ *less* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $1^{gr}\cdot9$, being $0_{gr}\cdot5$ *less* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 85 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 564 grains, being 11 grains *greater* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·0.

WIND.

The proportions were of N. 3, S. 9, W. 9, and E. 10. The greatest pressure in the month was $11^{lbs}\cdot0$ on the square foot on the 26th.

RAIN.

Fell on 7 days in the month, amounting to $0^{in}\cdot6$, as measured in the simple cylinder gauge partly sunk below the ground; being $1^{in}\cdot2$ *less* than the average fall of the preceding 46 years.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32 Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day. Whewell's.	Amount of Horizontal Movement of the Air on each Day. Robinson's.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Feb. 1	..	30·076	53·8	38·4	46·4	43·8	79·6	30·2	43·0	42·0	2·6	8·4	0·8	+ 9·2	SW	SW ; NW	5·0	0·0	0·8	155	318	0·00
2	Last Qr.	30·521	45·1	34·7	38·6	33·5	77·8	23·0	43·0	42·0	5·1	11·4	1·6	+ 1·6	NW	NW	3·5	0·0	0·2	50	175	0·00
3	..	30·253	45·2	32·5	39·6	36·1	62·8	25·0	43·0	42·0	3·5	7·9	2·8	+ 2·3	WSW	SW	2·5	0·0	0·0	145	332	0·00
4	..	29·792	46·8	37·3	41·7	37·7	87·0	32·8	42·5	41·5	4·0	8·8	2·6	+ 4·0	SW	SW	5·0	0·0	2·0	205	426	0·00
5	Greatest Declination S.	29·492	47·0	41·5	44·2	40·9	58·0	35·3	42·5	41·5	3·3	6·5	2·5	+ 5·8	SW	SW	9·0	0·0	2·8	260	559	0·00
6	..	29·263	50·0	43·1	45·7	42·1	80·0	40·0	42·5	41·5	3·6	6·1	1·3	+ 6·7	SW	SW	8·0	0·0	3·5	180	405	0·00
7	..	29·419	50·6	38·4	44·0	41·1	82·0	32·0	43·0	42·0	2·9	5·0	1·3	+ 4·8	SW	SSW	2·0	0·0	0·2	70	189	0·00
8	..	29·384	48·2	40·2	43·9	41·5	63·7	36·0	43·5	42·5	2·4	7·1	2·0	+ 4·7	SSW	SE	1·5	0·0	0·0	5	100	0·02
9	New	29·547	43·8	38·3	41·0	40·9	48·0	32·0	43·5	42·5	0·1	0·5	0·0	+ 2·0	SE	ESE ; NE	3·5	0·0	0·3	125	286	0·11
10	..	30·107	43·8	32·9	37·0	31·6	91·0	34·0	..	..	5·4	11·4	4·5	— 1·7	NE	NE	7·0	0·0	1·5	65	221	0·00
11	..	29·736	39·0	27·3	31·9	28·2	93·5	18·0	..	..	3·7	7·8	0·8	— 6·6	NNE	NE	3·0	0·0	0·5	49	229	Melted snow 0·04
12	In Equator	29·517	37·8	24·4	30·2	24·4	79·0	16·0	..	..	5·8	10·8	3·7	— 8·1	NW	SW	0·0	0·0	0·0	27	75	0·00
13	..	29·561	42·7	30·5	36·1	34·6	65·0	19·0	..	..	1·5	4·4	0·5	— 2·1	SW	SE ; NW ; N	2·5	0·0	0·1	15	101	0·05
14	Apogee	29·859	43·2	26·6	36·2	34·4	61·0	17·0	..	..	1·8	6·8	1·1	— 1·8	N	SE	4·0	0·0	0·5	95	204	0·06
15	..	29·513	50·0	40·5	44·5	41·7	54·0	31·2	..	..	2·8	3·6	1·5	+ 6·4	S	SSW	3·0	0·0	0·6	110	263	0·11
16	..	29·584	53·3	42·0	47·2	44·0	77·0	36·0	..	..	3·2	6·1	0·6	+ 9·1	SW	SW	2·0	0·0	0·2	38	107	0·00
17	..	29·578	56·0	38·7	46·4	42·8	96·0	37·0	42·5	41·5	3·6	9·2	0·7	+ 8·2	SW	S ; SE	4·0	0·0	0·2	106	230	0·00
18	First Qr.	29·501	53·9	37·7	45·5	44·0	97·0	29·0	42·5	41·5	1·5	5·8	0·0	+ 7·2	SE ; S	S	2·0	0·0	0·0	38	133	0·00
19	Greatest Declination N	29·523	52·5	39·5	45·5	42·1	82·0	30·5	42·5	41·5	3·4	11·8	0·9	+ 7·1	S ; SW	SW	3·0	0·0	0·3	53	132	0·00
20	..	29·427	49·0	35·7	42·6	42·0	71·7	27·6	43·0	42·0	0·6	2·6	0·0	+ 4·1	SW	SW	12·0	0·0	1·5	243	531	0·02
21	..	29·271	53·2	44·7	48·6	45·7	76·0	38·0	43·5	42·5	2·9	5·3	0·6	+10·1	SW	SW	25·0	3·0	7·7	310	646	0·25
22	..	29·509	53·0	41·7	46·9	43·6	78·0	37·0	44·0	43·0	3·3	5·8	1·1	+ 8·3	SW	SW	5·0	0·0	1·0	..	87	0·00
23	..	29·416	48·5	43·3	45·6	45·6	50·0	40·0	44·0	43·0	0·0	0·0	0·0	+ 6·7	SW	E	0·0	0·0	0·0	..	184	0·34
24	..	29·781	44·0	40·0	41·9	40·9	49·0	40 8	44·5	43·5	1·0	2·3	0·0	+ 2·8	ENE ; NNE	NE	6·0	0·0	1·8	..	388	0·59
25	Full	30·039	45·3	38·7	41·0	39·5	55·0	36·0	45·0	44·0	1·5	3·1	0·2	+ 1·5	NNE	NNE	3·0	0·0	0·5	..	70	0·00
26	In Equator; Perigee.	30·009	50·5	33·7	41·8	40·2	88·0	23·0	45·0	44·0	1·6	5·3	0·0	+ 2·1	NNE	N by E	0·0	0·0	0·0	..	57	0·00
27	..	29·855	50·3	30·7	40·2	38·1	77·0	22·0	45·0	44·0	2·1	6·3	1·4	+ 0·4	N	SW	2·5	0·0	0·5	166	276	0·00
28	..	29·684	51·7	38·8	44·5	40·9	83·0	30·4	45·0	44·0	3·6	7·1	1·7	+ 4·5	SW ; NW	NW ; SW	2·5	0·0	0·3	163	232	0·19
Means	..	29·686	48·2	36·9	42·1	39·4	73·6	30·3	43·5	42·5	2·7	6·3	1·2	+ 3·5	...	...	..	..	..	Sum 2673	Sum 6956	Sum 1·78

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·544 on the 2nd; the first minimum in the month was 29in·246 on the 6th.
The second maximum ,, was 29in·466 on the 7th; the second minimum ,, was 29in·368 on the 8th.
The third maximum ,, was 30in·132 on the 10th; the third minimum ,, was 29in·457 on the 13th.
The fourth maximum ,, was 29in·962 on the 14th; the fourth minimum ,, was 29in·471 on the 15th.
The fifth maximum ,, was 29in·670 on the 16th; the absolute minimum ,, was 29in·186 on the 21st.
The sixth maximum ,, was 29in·541 on the 22nd; the sixth minimum ,, was 29in·395 on the 23rd.
The seventh maximum ,, was 30in·073 on the 25th.
The range in the month was 1in·358.
The mean for the month was 29in·686, being 0in·101 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 56°·0 on the 17th; the lowest was 24°·4 on the 12th.
The range ,, was 31°·6.
The mean ,, of all the highest daily readings was 48°·2, being 3°·6 *higher* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 36°·9, being 3°·7 *higher* than the average of the preceding 20 years.
The mean daily range was 11°·3, being 0°·1 *less* than the average of the preceding 20 years.
The mean for the month was 42°·1, being 3°·7 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Feb. 1	o	w	10	10, cu.-s, ci.-s : 2, ci : 8, ci.-s
2	v	v	o	o : 6, ci.-cu, ci : o, h
3	s	s	10, s, ci.-s	10, s, ci.-s
4	w	w	10, ci.-s : o	o : 10
5	o	o	10	10
6	o	o	10, oc.-r	7, ci.-s, sc, r : o
7	o	o : w	10, s, ci.-s	5, ci.-s, sc : 5, ci.-cu, ci.-s
8	o	o	10, ci.-s	10, ci.-s
9	w	s N : o	10	10, oc.-r
10	o	o : w	10, cu.-s, ci.-s	3, ci, li.-cl : o
11	o	s N, s P, sps, g cur : s	10, sn	10, sn, hl : 1, ci
12	w	w	3, ci, h.-f	3, ci.-h : 10
13	o : s N	s N : w	10, sn : h.-r	2, ci, li.-cl : 10, gt.-glm, f : 10
14	v	v	o : 10, ci.-cu, ci.-s	10, s, ci.-s : r
15	o	o : w	10, r	10 : o
16	o	o : s	10, ci.-s, sc, oc.-r	10, cu.-s, ci.-s : 10, oc.-r
17	v	v	7, ci.-cu, ci.-s	7, ci.-cu, ci.-s : o
18	ss N, ss P	—	10, ci.-s, ci	6, ci.-cu, ci.-s : 2
19	o	o : s, sps	10, ci.-s, ci	10, ci.-cu, ci.-s : lu.-ha
20	s	s N, sps	10, s, ci.-s	10, oc.-r : 10, r
21	o	o	10, ci.-s, sc : 7, ci.-s, ci	10, h.-r : 10, ci-s, sc
22			o : 5, ci.-s, sc	10, ci.-s, ci
23			10, r	10, oc.-r
24			10, r	10, ci.-s, n, sc, r
25	o	o	10	10, oc.-r
26	o	o	10, ci.-s, ci, f : o	o : 10, f
27	o	o	7, ci.-cu, ci	7, ci.-cu, ci.-s : o, h, a
28	o	o	10, h.-r	8, cu, ci.-cu, ci : 1, ci

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 50°·7 on the 21st; and the lowest was 18°·6 on the 12th.

The mean ,, was 39°·4, being 5°·0 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·241, being 0^{in}·040 *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·8, being 0^{gr}·5 *greater* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 91 (that of Saturation being represented by 100), being 6 *greater* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 548 grains, being 6 grains *less* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·4.

WIND.

The proportions were; N. 4, S. 11, W. 9, and E. 4. The greatest pressure in the month was 25^{lbs}·0 on the square foot on the 21st.

RAIN.

Fell on 11 days in the month, amounting to 1^{in}·8, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·2 *greater* than the average fall of the preceding 46 years.

ELECTRICITY.—The insulating lamp was not burning from February 22 to February 24.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Wheewell's / Robinson's. Amount of Horizontal Movement of the Air on each Day. Wheewell's	Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Mar. 1	..	29·490	53·0	38·5	44·9	42·9	84·0	32·0	45·0	44·0	2·0	4·2	1·5	+ 4·8	SW	W	9·0	0·0	2·5	258	485	0·26
2	..	29·744	50·0	36·5	43·4	40·3	70·0	29·0	45·0	44·0	3·1	6·1	2·1	+ 3·4	WNW	SW	11·0	0·0	2·8	345	649	0·07
3	Last Qr.	29·553	53·7	40·7	46·2	41·3	82·0	40·7	44·5	43·5	4·9	7·2	3·0	+ 6·3	W	W	19·0	0·0	5·0	323	435	0·05
4	Greatest Declination S.	29·920	47·8	36·8	41·0	35·4	88·0	31·0	44·0	43·0	5·6	8·2	2·4	+ 1·1	W ; NW	NW	6·0	0·0	2·5	152	319	0·07
5	..	30·001	48·0	34·2	41·4	40·7	55·0	28·0	43·5	42·5	0·7	5·0	0·0	+ 1·4	NW	SW	4·0	0·0	1·0	243	476	0·01
6	..	29·636	55·4	45·6	48·6	44·7	92·0	40·2	43·5	42·5	3·9	5·4	0·0	+ 8·5	SW	SW	12·0	1·0	4·0	271	580	0·05
7	..	29·967	53·0	40·1	44·9	36·9	87·0	30·0	44·0	43·0	8·0	11·3	5·9	+ 4·8	WNW	NW ; SW	6·0	0·0	1·5	213	446	0·00
8	..	29·890	60·0	43·2	50·3	48·4	95·0	36·3	44·5	43·5	1·9	4·6	1·3	+10·2	W	W	5·0	0·0	2·0	160	328	0·00
9	..	30·241	53·4	36·5	43·9	39·5	88·0	26·0	45·0	44·0	4·4	8·4	3·5	+ 3·7	WNW	SW	3·0	0·0	0·2	162	298	0·00
10	..	29·709	57·8	37·9	46·7	44·5	100·5	29·7	45·5	44·5	2·2	6·8	2·0	+ 6·4	WSW	W	5·0	0·0	1·5	263	539	0·03
11	In Equator; New.	29·200	48·8	35·3	40·6	36·2	92·0	33·6	45·5	44·5	4·4	7·8	2·9	+ 0·1	W	WNW	19·0	0·0	3·7	209	459	0·18
12	..	29·240	49·8	34·7	40·8	38·3	56·0	28·0	45·0	44·0	2·5	5·5	1·2	+ 0·2	W ; NW	NW	8·0	0·0	1·0	201	426	0·10
13	Apogee	29·771	49·5	35·7	40·7	37·0	86·0	27·3	45·0	44·0	3·7	6·7	2·9	— 0·3	NW ; N	NNE	6·0	0·0	1·0	133	278	0·03
14	..	30·097	52·8	29·1	41·7	38·5	91·0	16·7	45·5	44·5	3·2	9·2	0·0	+ 0·4	Calm	W	0·0	0·0	0·0	156	301	0·01
15	..	29·977	54·0	37·7	45·5	41·7	85·0	33·0	45·5	44·5	3·8	8·4	1·1	+ 4·0	WSW	NW	2·5	0·0	0·3	124	235	0·01
16	..	29·811	49·0	33·5	40·8	39·8	70·0	23·0	45·5	44·5	1·0	4·2	0·0	— 0·9	SW	SW ; W	2·5	0·0	0·4	165	330	0·17
17	..	29·506	44·6	31·8	38·0	36·2	58·0	22·0	45·0	44·0	1·8	3·8	1·2	— 3·8	SW	SW	12·0	0·0	2·5	257	505	0·35
18	Greatest Declination N.	29·270	50·0	32·8	40·2	37·3	92·0	26·0	45·0	44·0	2·9	6·3	2·1	— 1·6	WSW	SW	5·0	0·0	0·8	186	388	0·00
19	First Qr.	28·918	50·0	36·5	42·0	39·1	89·0	33·5	44·5	43·5	2·9	5·5	2·2	+ 0·2	SW ; W	NW	3·0	0·0	2·0	201	429	0·07
20	..	29·377	48·8	36·5	42·0	41·8	59·0	26·2	44·0	43·0	0·2	2·6	0·0	+ 0·1	W	SW ; W	10·0	0·0	1·8	251	514	0·22
21	..	29·222	49·0	34·0	39·4	35·2	83·0	27·0	44·0	43·0	4·2	7·1	2·5	— 2·5	W	W	7·0	0·0	2·0	236	485	0·01
22	..	29·615	53·0	32·5	42·3	40·0	87·0	24·7	43·5	42·5	2·3	6·3	1·0	+ 0·4	W ; NW	W	5·0	0·0	0·5	160	317	0·00
23	..	29·717	57·3	37·8	45·1	43·3	96·0	30·0	44·0	43·0	1·8	5·9	1·1	+ 3·1	SW	SW	1·5	0·0	0·0	86	167	0·00
24	..	29·651	61·8	37·4	48·9	47·4	111·0	..	44·5	..	1·5	6·7	0·8	+ 6·8	SW	NW ; N	2·0	0·0	0·0	74	171	0·00
25	In Equator	29·747	47·0	40·5	42·8	42·1	52·0	39·2	45·0	44·0	0·7	1·6	0·0	+ 0·6	N	E	0·0	0·0	0·0	62	135	0·22
26	Last Perigee	29·496	58·6	41·7	47·5	46·7	108·5	35·0	45·0	44·0	0·8	3·6	0·4	+ 5·2	S	SW	1·5	0·0	0·0	105	187	0·00
27	..	29·316	58·3	40·7	49·2	47·1	105·0	32·6	45·5	44·5	2·1	6·2	1·4	+ 6·8	SW	SW	1·5	0·0	0·1	91	181	0·00
28	..	29·374	56·5	40·0	46·4	45·3	83·0	40·0	46·0	45·0	1·1	5·4	0·0	+ 3·8	SW	NW	0·0	0·0	0·0	106	195	0·06
29	..	29·603	56·1	36·5	45·0	43·1	106·0	31·0	46·5	45·5	1·9	5·8	0·9	+ 2·2	WNW	SW	1·0	0·0	0·0	129	244	0·00
30	..	29·496	51·0	38·7	43·4	42·4	74·0	31·8	46·5	45·5	1·0	3·2	0·7	+ 0·4	SW	SW	3·0	0·0	0·2	59	148	0·07
31	Greatest Declination S.	29·490	54·9	37·0	43·1	42·9	71·0	36·0	47·0	46·0	0·2	1·9	0·0	— 0·3	SSW	SW	0·0	0·0	0·0	36	92	0·17
Means	..	29·614	52·7	37·1	43·8	41·2	83·7	30·7	44·9	43·9	2·6	5·8	1·4	+ 2·4	...	...	..	..	..	Sum 5417	Sum 10742	Sum 2·21

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·843 on the 2nd; the second maximum ,, was 30in·118 on the 5th; the third maximum ,, was 30in·006 on the 7th; the absolute maximum ,, was 30in·283 on the 9th; the fifth maximum ,, was 30in·148 on the 14th; the sixth maximum ,, was 29in·529 on the 20th; the seventh maximum ,, was 29in·743 on the 23rd; the eighth maximum ,, was 29in·806 on the 25th; the ninth maximum ,, was 29in·615 on the 29th.

The first minimum in the month was 29in·435 on the 1st; the second minimum ,, was 29in·437 on the 3rd; the third minimum ,, was 29in·535 on the 6th; the fourth minimum ,, was 29in·861 on the 8th; the fifth minimum ,, was 29in·179 on the 11th; the absolute minimum ,, was 28in·818 on the 19th; the seventh minimum ,, was 29in·160 on the 20th; the eighth minimum ,, was 29in·627 on the 24th; the ninth minimum ,, was 29in·295 on the 27th; the tenth minimum ,, was 29in·466 on the 31st.

The range in the month was 1in·465.

The mean for the month was 29in·614, being 0in·179 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 61°·8 on the 24th; the lowest was 29°·1 on the 14th.

The range ,, was 32°·7.

The mean ,, of all the highest daily readings was 52°·7, being 2°·7 *higher* than the average of the preceding 20 years.

The mean ,, of all the lowest daily readings was 37°·1, being 1°·8 *higher* than the average of the preceding 20 years.

The mean daily range was 15°·6, being 0°·9 *greater* than the average of the preceding 20 years.

The mean for the month was 43°·8, being 2°·1 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
March 1	o	ss N, sps, g cur : o	10, h.-r	5, cu, ci.-cu, ci : t : o
2	o	o	10, ci.-s, ci	10, s, ci.-s : h.-r
3	o	o	10, fr.-sqs	5, shs.-r
4	o	o	5, ci, sc	5, ci.-cu, ci : o
5	o	o	10	10, sl.-r
6	o	o	10	10 : sqs.-r : v
7	o	w : o	5, ci.-cu, ci : 10	10, cu.-s, ci.-s
8	o	o	10 : 7, ci.-cu, ci.-s	10 : o
9	v	v	7, ci.-cu, ci.-s, h	3, ci.-cu, ci : o, a
10	o : w	o	3, ci	3, ci : h.-sh.-r : o, h
11	o	o	10, ci.-cu, ci.-s	10, cu, ci.-cu, ci : 10, h.-r : o
12	o	s N, s P, sps, g cur	10, h.-r	10, h.-r, t : 10, fr.-shs.-r
13	o	o	10 : 2, cu, ci.-cu, ci	2, cu, ci.-cu, ci : o
14	o	o	o, h.-fr : 10, cu, ci.-cu, ci	10, cu, ci.-cu, ci : oc.-r
15	o	o : w	7, cu, ci.-cu, oc.-r	7, cu, ci.-cu, ci : o, h
16	o	s N : o	10, ci.-cu, ci.-s	10, r : hl : o
17	o	m N : o	10, s, ci.-s, h	10, r : o
18	o	o	o : 7, cu, ci.-cu	7, ci.-cu, ci.-s
19	o	s N : o	10, th.-r	10, cu, cu.-s, ci.-s, hl, r : 7, lu.-ha
20	o	o	10	10, oc.-r : 10, fr.-h.-sqs : o
21	o	s N, s P, sps, g cur : o	o : 2, ci.-cu	7, ci.-cu, ci.-s : 10, shs.-hl.-sl.-r : o
22			o : 7, cu, ci.-cu, ci	7, cu, ci.-cu, ci : lu.-ha : h
23			10 : 7, ci.-cu, ci.-s	3, ci.-cu, ci.-s : o
24			o, h	10, ci.-cu, ci.-s
25			10, r	10
26			10, ci.-s	10, ci.-cu, ci.-s
27	o	o	8, ci.-s, ci : 1, ci	5, ci.-cu, ci.-s : 10, ci.-s, oc.-r
28	o	o	10, h.-r	10, sl.-r : o, h
29	v	v	o, h	o
30	o	w	10, sl.-r	10, cu.-s, ci.-s : 7, ci.-s
31	o	o	10, r	8, ci.-s li. cl : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·4 on the 24th ; and the lowest was 33°·4 on the 21st.

The mean „ was 41°·2, being 4°·8 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·259 being 0^{in}·043 *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·9, being 0^{gr}·4 *greater* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 90 (that of Saturation being represented by 100), being 8 *greater* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 545 grains, being 5 grains *less* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 6·5.

WIND.

The proportions were ; N. 4, S. 5, W. 22, and E. o. The greatest pressure in he month was 19^{lbs}·0 on the square foot on the 3rd and 11th.

RAIN.

Fell on 21 days in the month, amounting to 2^{in}·2, as measured in the simple cylinder gauge partly sunk below the ground ; being 0^{in}·6 *greater* than the average fall of the preceding 46 years.

ELECTRICITY.—From March 22 to March 26 the insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
April 1	..	29·612	52·2	33·1	41·5	40·9	77·0	25·0	47·5	46·5	0·6	0·4	0·0	— 2·1	SW; S by E	SE	0·0	0·0	0·0	34	94	0·11
2	Last Qr.	29·558	54·0	35·6	43·3	42·3	85·0	32·0	47·5	46·5	1·0	4·0	0·0	— 0·8	SE	SW	3·5	0·0	0·2	82	173	0·02
3	..	29·600	56·0	39·5	45·2	44·5	82·0	33·0	48·0	47·0	0·7	4·8	0·0	+ 0·7	SW	SW	2·0	0·0	0·0	101	207	0·17
4	..	29·667	56·3	40·8	47·1	45·0	96·0	36·0	48·0	47·0	2·1	5·8	1·3	+ 2·3	W	W	1·5	0·0	0·0	122	233	0·00
5	..	29·785	54·0	36·3	44·0	42·8	77·0	26·3	48·0	47·0	1·2	5·0	0·5	— 1·1	WSW	NW	0·0	0·0	0·0	36	111	0·00
6	..	30·031	52·2	30·4	40·2	39·4	103·0	22·0	..	..	0·8	3·8	0·0	— 5·2	NW	NW; NE	0·0	0·0	0·0	78	174	0·00
7	In Equator	30·123	53·0	38·8	42·1	41·0	81·0	32·0	48·0	47·0	1·1	3·7	0·0	— 3·4	NE; E	ESE	1·5	0·0	0·0	80	192	0·00
8	..	30·278	49·8	32·7	41·1	38·6	86·0	21·9	48·0	47·0	2·5	3·2	1·8	— 4·4	ESE	E by N	1·0	0·0	0·0	95	214	0·00
9	..	30·396	53·5	33·5	41·7	40·5	90·2	26·0	48·0	47·0	1·2	4·6	0·0	— 3·7	E by N	E by S	3·0	0·0	0·2	70	179	0·00
10	Apogee; New	30·364	55·0	32·3	42·7	39·7	107·0	21·0	49·0	48·0	3·0	6·8	1·0	— 2·4	ESE	E	0·0	0·0	0·0	40	98	0·00
11	..	30·297	61·2	28·6	45·6	41·3	111·0	20·3	49·0	48·0	4·3	8·0	1·0	+ 0·6	E	E	0·0	0·0	0·0	34	98	0·00
12	..	30·222	63·5	38·3	49·4	46·0	101·0	28·0	49·0	48·0	3·4	6·5	1·0	+ 4·5	E	NE	3·0	0·0	0·3	125	272	0·00
13	..	30·135	55·3	41·5	46·7	45·7	86·0	37·8	49·0	48·0	1·0	3·6	0·0	+ 1·5	NE	NE	1·5	0·0	0·1	116	253	0·00
14	..	30·130	48·0	41·7	44·2	43·4	69·5	39·0	49·0	48·0	0·8	1·3	0·0	— 1·3	NE	NE	1·0	0·0	0·0	112	252	0·00
15	Greatest Declination N.	30·162	53·2	40·8	45·2	42·4	67·0	39·0	49·0	48·0	2·8	9·2	0·9	— 0·5	NE	NE	2·5	0·0	0·2	91	224	0·00
16	..	30·235	61·8	40·1	49·9	41·9	109·0	30·0	49·5	48·5	8·0	17·5	4·2	+ 3·9	NE	E	3·0	0·0	0·3	118	254	0·00
17	..	30·179	55·5	37·7	46·0	42·8	109·0	30·5	49·5	48·5	3·2	10·6	0·9	— 0·2	E	E	1·0	0·0	0·0	119	239	0·00
18	First Qr.	30·056	56·0	40·5	46·6	40·6	103·0	39·0	50·0	49·0	6·0	12·4	3·3	+ 0·2	E by S	E by S	1·0	0·0	0·0	96	203	0·00
19	..	30·067	52·7	39·8	44·9	38·6	83·0	38·0	50·0	49·0	6·3	10·6	4·8	— 1·6	ESE	ENE	2·5	0·0	0·2	99	231	0·00
20	..	30·066	53·7	32·5	41·3	31·5	103·0	22·0	50·0	49·0	9·8	20·2	5·2	— 5·4	E	E	2·0	0·0	0·1	86	196	0·00
21	In Equator	29·743	54·2	26·8	40·2	34·5	72·0	14·0	50·5	49·5	5·7	15·0	3·8	— 6·8	E; SW	NE	2·5	0·0	0·0	88	200	0·00
22	..	29·738	56·2	34·5	44·1	35·7	95·0	21·7	51·0	50·0	8·4	17·2	4·4	— 3·4	NE	NNE	1·0	0·0	0·0	35	123	0·00
23	..	29·733	54·0	39·0	45·1	40·7	79·5	39·0	51·0	50·0	4·4	10·8	1·5	— 2·5	NE	NNE	2·5	0·0	0·1	43	126	0·01
24	Perigee; Full.	29·866	61·0	33·9	46·3	40·4	85·0	23·0	51·5	50·5	5·9	16·2	2·0	— 1·3	NNE	N	0·0	0·0	0·0	80	166	0·00
25	..	29·884	61·3	39·2	49·5	42·0	73·0	26·0	51·5	50·5	7·5	15·8	4·1	+ 1·9	NW	NW	3·0	0·0	0·2	122	279	0·00
26	..	29·957	61·0	41·5	48·9	41·2	86·0	29·7	52·0	51·0	7·7	17·1	4·0	+ 1·3	NW	NW; E	3·0	0·0	0·3	103	226	0·00
27	Greatest Declination S.	29·960	41·3	34·5	36·2	34·3	42·0	26·0	52·0	51·0	1·9	3·1	1·0	—11·8	E	E	0·0	0·0	0·0	59	154	0·51
28	..	29·915	53·7	29·1	40·8	36·1	86·0	18·0	..	..	4·7	15·6	2·1	— 7·7	ESE	NW; N	0·0	0·0	0·1	86	185	0·01
29	..	30·058	52·3	36·7	43·1	33·6	97·0	28·7	..	..	9·5	17·0	3·1	— 6·0	N	W	0·0	0·0	0·0	57	148	0·00
30	..	30·140	59·2	31·8	46·4	37·9	97·0	20·5	..	..	8·5	18·6	4·6	— 3·1	N	WSW	3·0	0·0	0·0	80	170	0·00
Means	..	29·999	55·0	36·0	44·3	40·2	87·9	28·2	49·4	48·4	4·1	9·6	1·9	— 1·9	...	...	..	..	..	Sum 2487	Sum 5674	Sum 0·83

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·628 on the 1st; the absolute minimum in the month was 29in·553 on the 2nd.
The absolute maximum ,, was 30in·412 on the 9th; the second minimum ,, was 30in·122 on the 13th.
The third maximum ,, was 30in·247 on the 16th; the third minimum ,, was 29in·691 on the 22nd.
The fourth maximum ,, was 30in·037 on the 26th; the fourth minimum ,, was 29in·904 on the 28th.
The fifth maximum ,, was 30in·159 on the 30th.
The range in the month was 0in·859.
The mean for the month was 29in·999, being 0in·264 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 63°·5 on the 12th; the lowest was 26°·8 on the 21st; and the range in the month was 36°·7.
The mean ,, of all the highest daily readings was 55°·0, being 1°·8 *lower* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 36°·0, being 2°·6 *lower* than the average of the preceding 20 years.
The mean daily range was 19°·0, being 0°·8 *greater* than the average of the preceding 20 years.
The mean for the month was 44°·3, being 2°·0 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
April 1	o	sN : s	10, f : r	10, ci.-cu, ci.-s, oc.-r : o : 10
2	o	o	10, oc.-r	7, s, ci.-s, fr.-shs.-r
3	o	o	10, h.-r : 9, ci.-cu, ci.-s	7, s, ci.-s, li.-cl : 10, oc.-r
4	o	o	10 : 4, ci.-cu, ci.-s	5, ci.-cu, ci.-s, ci
5	o	o	10, ci.-cu, ci.-s, h	10, h : 7, ci.-cu, ci.-s
6	w	o : s	10, th.-f	5, ci.-cu, ci.-s : 10
7	v	v	10 : 7, ci.-cu, ci.-s	7, ci.-cu, ci.-s : 5, s, ci.-s
8	o	o : s	10, cu, ci.-cu, ci	10 : o
9	o : m	m : s	7, cu, ci.-cu, ci	7, cu, ci.-cu, ci
10	o	m : ss, sps	o	o
11	s	w	o, h	o : f
12	w	o : w	10, ci.-cu, ci.-s	7, cu, ci.-cu, ci.-s : 10, ci.-s
13	w	o : s	10, ci.-s	10, s, ci.-s : 10, oc.-r
14	v	v	10, oc.-r	10
15	o	w	10	10 : a
16			2, cu, ci.-cu, ci	o
17			10 : o	o : 10 : oc.-r
18			10 : o	o : 10
19			7	7, ci.-cu, cu.-s, ci.-s : 10
20			7, ci.-cu, ci.-s	7, ci.-s, ci : o
21			10, h	10, sl.-r : o
22			10, cu.-s, ci.-s	10
23	v	v	10	10, r : o
24	s	s : ss, sps	7, ci.-s, ci	7, ci.-s, h : o, h
25	m	o	10, ci.-cu, ci.-s	7, ci.-cu, ci.-s : o
26			7, ci.-cu, ci.-s	7, cu.-s, ci.-s : 10
27			10, h.-r	10, sn, h.-r : 6, ci.-s : o, h.-f
28			10, cu.-s, ci.-s, h.-f	10, s, ci.-s : hl, r
29			10, ci.-cu, ci.-s	10, cu.-s, ci.-s : o
30	o	o	7, ci.-cu, ci.-s	10, cu, cu.-s, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 54°·8 on the 12th; and the lowest was 30°·0 on the 20th.

The mean ,, was 40°·2, being 0°·3 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot249$ being $0^{in}\cdot002$ *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{gr}\cdot9$, being the same as the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 85 (that of Saturation being represented by 100), being 6 *greater* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 551 grains, being 9 grains *greater* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·1.

WIND.

The proportions were; N. 9, S. 2, W. 5, and E. 14. The greatest pressure in the month was $3^{lbs}\cdot5$ on the square foot on the 2nd.

RAIN.

Fell on 6 days in the month, amounting to $0^{in}\cdot8$, as measured in the simple cylinder gauge partly sunk below the ground; being $1^{in}\cdot0$ *less* than the average fall of the preceding 46 years.

ELECTRICITY.—April 16 to 22, and April 26 to 29. The insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 45 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	miles.	in.
May 1	Last Qr.	30·139	61·5	43·2	50·2	40·2	97·0	32·5	..	..	10·0	15·0	5·5	+ 0·2	WSW	NNW	2·5	0·0	0·1	80	187	0·00
2	..	30·104	64·0	39·5	50·4	42·5	94·0	28·0	..	..	7·9	14·8	4·1	— 0·1	NNW	N	0·0	0·0	0·0	87	192	0·00
3	..	29·868	62 7	41·5	50·0	43·8	100·3	38·8	..	..	6·2	17·1	4·0	— 0·9	W	NW ; N	6·5	0·0	0·8	182	393	0·05
4	In Equator	29·937	53·6	36·7	43·3	35·1	109·0	31·8	..	..	8·2	16·4	3·6	— 8·0	N	NNE	9·0	0·0	1·2	182	392	0·07
5	..	30·049	52·6	34·8	42·9	34·3	96·0	26·0	..	..	8·1	16·0	3·6	— 8·7	NNE	NNE	6·5	0·0	0·7	110	238	0·00
6	..	29·972	56·0	40·3	46·2	36·9	93·0	35·0	..	..	9·3	18·0	5·5	— 5·6	NE	NNE	0·0	0·0	0·0	46	139	0·00
7	Apogee	29·831	49·8	34·2	42·1	36·8	71·0	23·9	..	..	5·3	9·7	5·3	— 9·7	NE	NNE	0·0	0·0	0·0	57	135	0·00
8	..	29·729	48·0	36·5	39·9	34·4	75·0	33·0	..	..	5·5	10·7	2·0	—11·9	NNE	NNE	0·0	0·0	0·0	6	38	0·06
9	New	29·602	56·2	33·4	43·8	34·8	103·8	24·8	..	..	9·0	15·8	2·0	— 7·8	NNE	NNE	0·0	0·0	0·0	67	160	0·00
10	..	29·551	52·3	37·7	44·2	35·4	70·0	30·3	..	..	8·8	16·0	3·1	— 7·2	NE	ENE	3·5	0·0	0·8	137	338	0·00
11	..	29·441	50·0	40·8	44·4	44·4	50·0	39·3	..	..	0·0	0·8	0·0	— 6·9	ENE	ENE	4·0	0·0	0·5	59	150	1·07
12	Greatest Declination N.	29·654	65·0	45·3	52·1	49·7	86·5	44·1	52·0	51·0	2·4	5·7	0·9	+ 0·8	E	NE	2·5	0·0	0·1	105	247	0·05
13	..	30·106	53·2	40·6	45·1	39·0	69·0	40·2	52·0	51·0	6·1	11·2	3·3	— 6·3	N	N	2·0	0·0	0·1	45	141	0·00
14	..	30·257	65·0	33·7	51·5	44·5	97·0	26·0	52·5	51·5	7·0	17·3	3·1	— 0·3	Calm	SSW	0·0	0·0	0·0	60	121	0·00
15	..	30·176	71·3	46·7	57·7	49·1	103·0	38·3	53·0	52·0	8·6	19·6	1·4	+ 5·5	Calm	SE	0·0	0·0	0·0	45	116	0·00
16	..	30·014	77·9	48·3	61·1	51·8	113·0	39·7	53·0	52·0	9·3	22·6	1·4	+ 8·5	SW	N ; SE	0·0	0·0	0·0	85	184	0·01
17	First Qr.	30·009	61·2	40·0	48·7	44·8	86·2	48·3	53·0	52·0	3·9	11·2	4·0	— 4·1	NW	NE	3·0	0·0	0·2	85	202	0·00
18	..	30·124	60·5	37·8	46·8	37·5	103·0	35·0	53·0	52·0	9·3	16·8	5·3	— 6·3	NE	NE ; SE	0·0	0·0	0·0	63	143	0·00
19	In Equator	30·245	60·2	36·0	46·9	37·9	116·5	24·0	53·8	52·8	9·0	18·6	2·5	— 6·4	NE	NE ; SE	0·0	0·0	0·0	74	158	0·00
20	..	30·218	74·0	39·7	57·5	46·5	107·0	29·0	55·0	54·0	11·0	24·1	2·1	+ 3·9	WSW	NW	2·0	0·0	0·1	80	184	0·00
21	..	30·187	78·6	48·8	62·9	51·0	106·0	46·0	55·7	54·7	11·0	25·5	2·9	+ 9·1	W	WNW	2·0	0·0	0·2	110	244	0·00
22	Perigee	30·042	68·8	53·7	60·4	54·6	82·0	45·0	56·0	55·0	5·8	11·5	5·7	+ 6·3	WNW ; N	N	0·0	0·0	0·0	53	136	0·00
23	..	29·902	80·2	51·5	64·9	58·1	119·0	50·0	57·4	56·4	6·8	20·9	0·4	+10·6	N ; SW	WSW ; N	4·0	0·0	0·1	137	283	0·50
24	Full	29·831	65·5	48·7	55·0	42·8	96·0	42·5	59·0	58·0	12·2	18·4	6·4	+ 0·6	NNE	W ; S	2·0	0·0	0·1	86	193	0·00
25	Greatest Declination S.	29·637	66·8	45·5	54·7	45·8	109·0	43·0	60·8	59·8	8·9	18·4	2·4	+ 0·1	SW	SW	3·0	0·0	0·3	175	339	0·00
26	..	29·745	64·0	47·9	54·3	48·7	96·0	44·4	61·7	60·7	5·6	11·2	3·3	— 0·4	SW	SW	3·0	0·0	0·3	106	207	0·00
27	..	29·930	72·0	48·3	58·5	44·4	119·0	43·7	61·0	60·0	14·1	25·6	8·4	+ 3·6	WSW ; NE	NE ; E	2·0	0·0	0·0	76	192	0·00
28	..	29·906	57·0	50·0	52·2	44·1	66·0	49·3	61·5	60·5	8·1	10·6	2·0	— 3·0	E	NE	2·5	0·0	0·2	109	237	0·02
29	..	29·799	72·8	49·2	58·0	48·6	124·4	47·0	61·5	60·5	9·4	16·4	6·4	+ 2·6	NE	NE ; S	1·5	0·0	0·0	50	132	0·00
30	..	29·790	75·3	51·4	62·8	46·2	125·0	48·8	62·0	61·0	16·6	26·8	6·8	+ 7·1	NE	Calm	0·0	0·0	0·0	61	145	0·00
31	Last Qr.	29·814	72·5	50·7	60·1	47·1	116·0	48 0	62·0	61·0	13·0	21·2	6·0	+ 4·0	N	SW	1·5	0·0	0·0	125	252	0·00
Means	..	29·924	63·5	43·0	51·9	43·6	96·7	37·9	56·8	55·8	8·3	16·3	3·7	— 1·0	...	...	..	..	..	Sum 2743	Sum 6218	Sum 1·83

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·076 on the 5th ; the absolute maximum ,, was 30in·309 on the 14th ; the third maximum ,, was 30in·262 on the 21st ; the fourth maximum ,, was 29in·972 on the 27th.

The first minimum in the month was 29in·826 on the 3rd.
The absolute minimum ,, was 29in·434 on the 11th.
The third minimum ,, was 29in·938 on the 17th.
The fourth minimum ,, was 29in·612 on the 25th.

The range in the month was 0in·875. The mean for the month was 29in·924, being 0in·162 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 80°·2 on the 23rd; the lowest was 33°·4 on the 9th; and the range in the month was 46°·8.
The mean ,, of all the highest daily readings was 63°·5, being 0°·9 *lower* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 43°·0, being 1°·2 *lower* than the average of the preceding 20 years.
The mean daily range was 20°·5, being 0°·3 *greater* than the average of the preceding 20 years.
The mean for the month was 51°·9, being 0°·9 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
May 1	o	w : m	10, ci.-cu, ci.-s, h	10, cu, cu.-s : 7, f
2	s	m	10, ci.-cu, ci.-s	8, ci.-cu, ci.-s : 10
3	o	o	10, oc.-r	10, ci.-cu, ci.-s : o
4	o	sN : o	10, oc.-r	7, shs.-hl.-r. : 8, s, ci.-s
5	o	o	9, ci.-cu, ci.-s	9, ci.-cu, ci.-s : 10, ci.-s
6	m	m	10, li.-cl	7, ci.-cu, ci.-s
7	o	o	10, sl.-r	10, sl.-r
8	w	w	10, sl.-r	10, sl.-r : 10, ci.-s
9	v	v	7, ci.-cu, ci.-s	7, ci.-cu, cu.-s, ci.-s : o
10			10, li.-cl	10, sl.-r
11			10, h.-r	10 : 10, l, t, h.-r : 10
12			10, s	10, ci, h : h.-r : 10
13			10	10 : o
14	o	o	0, h	7, li.-cl, h : o
15	o	o	0, h	3, cu, ci.-cu : o, h
16	w	o	2, ci, h	2, cu, ci.-cu : 10, r
17	o	o	10	10, cu.-s, ci.-s : o
18	o	v	7	7, cu, ci.-cu : o
19	v	v	7, cu.-s, ci.-s	7, ci.-cu, ci : o
20	o	o	2, h	2, cu, ci.-cu
21	o	o	7, ci, h	7, li.-cl
22	o	o	10	5, ci.-cu, ci.-s
23	w		7, cu, ci.-cu, ci	7, cu, ci.-cu, ci : 10, l, t, h.-r
24	o : s	s : w	7, ci.-cu, ci.-s	8, cu, ci.-cu, h : 3, ci
25	m	m	6, cu, ci.-cu, ci	9 : o
26	o	o : s	10, sl.-r	10, ci.-s
27	o	v	5, ci.-cu, ci.-s, h	8, ci : 10
28			10, sl.-r	10
29			10, cu.-s, ci.-s	7, cu.-s, ci.-s : 10, ci.-s
30			0, h	10 : 5, ci.-cu, ci.-s
31			7, ci.-cu, ci.-s	7, cu, ci.-cu, h : 10, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·5 on the 23rd; and the lowest was 34°·2 on the 7th.
The mean ,, ,, was 43°·6, being 1°·9 *lower* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0in·284, being 0in·016 *less* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3gr·2, being 0gr·2 *less* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 74 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 542 grains, being 4 grains *greater* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·6.

WIND.

The proportions were of N. 15, S. 4, W. 4, and E. 8. The greatest pressure in the month was 9lbs·0 on the square foot on the 4th.

RAIN.

Fell on 8 days in the month, amounting to 1in·8, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·3 *less* than the average fall of the preceding 46 years.

ELECTRICITY.—May 10 to 13, and May 28 to 31. The insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 45 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day. Whewell's	Amount of Horizontal Movement of the Air on each Day. Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
June 1	In Equator	29·680	65·8	52·1	56·5	50·3	97·0	53·0	62·0	61·0	6·2	13·5	0·6	+ 0·1	SW ; W	W	2·5	0·0	0·1	68	185	0·30
2	..	29·736	64·0	46·5	54·4	48·3	103·7	41·5	62·0	61·0	6·1	15·4	1·6	— 2·2	W	Calm	0·0	0·0	0·0	35	103	0·15
3	Apogee	29·884	62·0	48·0	53·4	48·3	87·0	40·8	62·0	61·0	5·1	12·0	1·2	— 3·4	N	N	0·0	0·0	0·0	60	141	0·00
4	..	29·888	62·0	51·0	53·8	49·0	100·0	49·8	62·0	61·0	4·8	9·7	0·8	— 3·3	N	Calm	0·0	0·0	0·0	20	102	0·13
5	..	29·833	66·8	49·2	55·4	48·6	110·0	46·0	62·0	61·0	6·8	14·3	1·7	— 1·7	SW	E	0·0	0·0	0·0	55	128	0·02
6	..	29·877	58·0	46·6	51·3	48·1	73·3	42·8	62·0	61·0	3·2	7·0	0·0	— 5·9	NE	NNE	2·5	0·0	0·1	145	302	0·00
7	..	29·796	62·0	49·3	52·9	47·8	97·0	48·0	61·4	60·4	5·1	10·3	4·0	— 4·4	NNE	NE	2·0	0·0	0·1	100	225	0·04
8	New Greatest Dec. N.	29·743	58·8	47·5	52·1	45·2	76·0	47·0	61·4	60·4	6·9	11·2	2·3	— 5·1	NE	NE	0·0	0·0	0·0	40	121	0·00
9	..	29·563	61·2	42·9	51·2	51·2	61·5	35·5	61·0	60·0	0·0	4·9	0·0	— 6·3	NE	NE ; N	1·0	0·0	0·0	65	161	0·21
10	..	29·695	66·2	50·5	55·8	51·1	105·0	45·0	60·7	59·7	4·7	9·5	1·7	— 1·9	W	SW	3·0	0·0	0·1	140	262	0·27
11	..	29·944	71·5	48·7	58·0	51·5	120·0	45·0	60·5	59·5	6·5	12·6	2·3	0·0	SW	SW	1·5	0·0	0·0	150	286	0·00
12	..	30·027	70·3	54·5	60·1	54·3	95·0	50·0	60·5	59·5	5·8	12·4	1·2	+ 1·8	SW	SW	2·0	0·0	0·1	100	188	0·00
13	..	30·034	78·3	51·8	64·3	54·9	125·0	47·0	61·0	60·0	9·4	19·7	1·4	+ 5·8	S ; SE	E	3·0	0·0	0·5	90	198	0·00
14	..	29·906	80·6	54·8	67·0	58·9	130·0	48·0	61·5	60·5	8·1	17·2	3·2	+ 8·2	NE	E ; NE	4·0	0·0	0·3	110	244	0·00
15	In Equator; First Quarter.	29·848	80·8	55·8	66·9	58·3	132·0	53·2	61·5	60·5	8·6	19·4	1·6	+ 7·9	NE	E	2·0	0·0	0·1	105	236	0·00
16	..	29·881	78·8	54·2	63·2	57·9	136·4	48·0	62·0	61·0	5·3	15·8	1·7	+ 3·9	NE	NE	0·5	0·0	0·0	85	203	0·00
17	..	29·921	72·2	49·5	58·9	52·1	129·0	45·3	62·5	61·5	6·8	15·5	3·2	— 0·5	NE	ESE	0·5	0·0	0·0	85	197	0·00
18	..	29·930	75·0	46·8	60·2	53·8	132·0	45·0	63·0	62·0	6·4	17·1	3·4	+ 0·7	ENE	E ; ESE	0·0	0·0	0·0	40	117	0·00
19	Perigee	29·867	81·8	53·0	65·1	58·2	123·0	50·0	63·7	62·7	6·9	20·2	3·0	+ 5·5	SE	SW ; SE	0·0	0·0	0·0	25	100	0·00
20	..	29·781	79·5	55·2	64·7	61·5	125·0	50·0	64·0	63·0	3·2	13·1	1·3	+ 4·9	SE	SW	0·0	0·0	0·0	50	143	0·13
21	Greatest Declination S.	29·759	76·6	56·5	63·9	60·7	110·0	51·3	64·6	63·6	3·2	11·2	2·9	+ 4·0	SW ; NE	ESE	0·0	0·0	0·0	5	138	0·02
22	Full	29·682	76·8	58·8	64·5	57·3	115·0	54·0	64·6	63·6	7·2	15·3	0·0	+ 4·5	Variable ; W	SW	0·0	0·0	0·0	85	175	0·00
23	..	29·600	73·0	53·0	61·7	55·5	113·0	47·6	65·5	64·5	6·2	15·7	1·2	+ 1·5	SW	SW	2·0	0·0	0·0	105	220	0·03
24	..	29·693	76·8	52·7	62·3	54·5	118·0	45·0	66·0	65·0	7·8	21·3	1·4	+ 1·9	WSW	SW	2·0	0·0	0·2	145	280	0·02
25	..	29·606	61·7	54·1	56·3	55·0	70·0	49·7	66·5	65·5	1·3	2·5	0·0	— 4·3	SW	SW	2·5	0·0	0·1	140	270	0·24
26	..	29·492	69·6	49·8	57·8	52·7	118·0	45·0	66·8	65·8	5·1	13·7	1·8	— 3·0	SW	SW ; S	1·5	0·0	0·0	90	195	0·09
27	..	29·588	77·0	47·7	58·5	53·6	115·0	41·3	67·0	66·0	4·9	16·0	1·2	— 2·5	NE	Calm	0·0	0·0	0·0	45	130	0·21
28	In Equator	29·652	76·0	50·7	61·8	56·1	116·0	47·5	67·0	66·0	5·7	13·7	1·2	+ 0·5	Calm	W	0·0	0·0	0·0	120	243	0·00
29	..	29·630	72·8	56·9	62·2	51·4	120·0	55·2	67·0	66·0	10·8	15·1	2·6	+ 0·7	NW	N	2·5	0·0	0·5	145	332	0·04
30	Last Qr.	29·915	68·0	51·0	57·4	47·4	104·5	48·0	67·5	66·5	10·0	17·5	4·2	— 4·1	NW	N	2·0	0·0	0·2	120	259	0·00
Means	..	29·782	70·8	51·3	59·1	53·1	108·6	47·2	63·3	62·3	5·9	13·8	1·8	+ 0·1	...	...	..	..	..	Sum 2568	Sum 5884	Sum 1·90

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first minimum in the month was 29in·676 on the 1st.
The first maximum in the month was 29in·906 on the 4th ; the second minimum ,, was 29in·540 on the 9th.
The absolute maximum ,, was 30in·073 on the 13th ; the third minimum ,, was 29in·838 on the 15th.
The third maximum ,, was 29in·943 on the 18th ; the fourth minimum ,, was 29in·595 on the 23rd.
The fourth maximum ,, was 29in·724 on the 24th ; the absolute minimum ,, was 29in·480 on the 26th.
The fifth maximum ,, was 29in·696 on the 28th ; the sixth minimum ,, was 29in·578 on the 29th.
The range in the month was 0in·593.
The mean for the month was 29in·782, being 0in·011 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 81°·8 on the 19th ; the lowest was 42°·9 on the 9th.
The range ,, was 38°·9.
The mean ,, of all the highest daily readings was 70°·8, being 0°·4 *lower* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 51°·3, being 1°·1 *higher* than the average of the preceding 20 years.
The mean daily range was 19°·5, being 1°·5 *less* than the average of the preceding 20 years.
The mean for the month was 59°·1, being 0°·1 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
June 1	s N, s P, sps, g cur	s N, s P, sps, g cur	10, r	10, ci.-cu, cu.-s, ci.-s, oc.-r
2	o	o	10, ci.-cu, cu.-s, h	10, h.-r
3	o	o	10	10
4	o	o	10	10, cu.-s, ci.-s
5	s N, s P, sps, g cur	s N, s P, sps, g cur	10, t, h.-r	10, t, h.-r : o, h
6	o	o	10	10
7	o	o	10, oc.-r	7, fr.-shs.-r : 10, cu.-s, ci.-s
8	o	o	10, ci.-cu, ci, oc.-r	10, shs.-r
9	o	o	10, cu, ci.-cu, ci	10, cu, ci.-cu, r : 7 oc.-r
10	o : s N	s N : o	10, r : 8, cu, ci.-cu	8, cu, ci.-cu : ci.-s, oc.-r
11	: w	w : o	7, cu	10, cu, ci.-cu : 10, oc.-r
12	o	o	10	10 : o
13	o	w	o	o
14	o	o	o	o
15	o	o	2, cu, ci.-cu	2, cu, ci.-cu
16	m	m	6, ci.-cu, ci	6, ci.-cu, ci.-s : 10, ci.-s
17	v	v	2, ci.-s	o : lu.-co
18	o	s	o	o : 7, ci.-cu, ci.-s
19	w	w : s	3. li.-cl	7, cu, ci.-cu, ci : o : 5, ci.-cu, ci.-s
20	o	s N, s P, sps, g cur : o	10, ci.-s, h.-r	10, ci.-cu, ci.-s, shs.-r : t : 2, ci.-s
21	s	s	10	10, oc.-r : 10, h.-r : 7, ci.-cu
22	v	v	7, ci.-s	7, ci.-s
23	m	m	10, oc.-r	10, t, r : 5, ci.-s
24	v	v	7, ci.-cu, ci.-s	7, cu, ci.-cu, ci.-s : 10, shs.-r : o
25	o	o	10, r	10, r : o
26	o	o	10, h.-r	10, cu.-s, ci.-s : 7, cu, ci.-cu : o
27	w	s N : w	10, ci.-cu, ci.-s	10, li.-cl : t : o
28	w	w	9, li.-cl	10
29	m	o : w	10, cu.-s, ci.-s	10, ci.-cu, ci
30	w	o	7, ci.-cu, ci	7, cu.-s, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 65°·3 on the 20th; and the lowest was 45°·3 on the 8th.

The mean ,, was 53°·1, being 2°·3 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}·404$, being $0^{in}·031$ *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{gr}·6$, being $0^{gr}·4$ *greater* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 81 (that of Saturation being represented by 100), being 7 *greater* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 531 grains, being the same as the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·4.

WIND.

The proportions were of N. 8, S. 7, W. 7, and E. 8. The greatest pressure in the month was $4^{lbs}·0$ on the square foot on the 14th.

RAIN.

Fell on 15 days in the month, amounting to $1^{in}·9$ as measured in the simple cylinder gauge partly sunk below the ground; being the same as the average fall of the preceding 46 years.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whewell's / Robinson's. Amount of Horizontal Movement of the Air on each Day. Whewell's	Whewell's / Robinson's. Amount of Horizontal Movement of the Air on each Day. Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
July 1	Apogee	29·992	76·3	48·7	61·8	50·3	132·0	42·0	67·5	66·0	11·5	22·8	3·1	+ 0·3	W	W	1·5	0·0	0·1	150	309	0·00
2	..	29·795	74·2	57·1	62·5	49·3	121·0	50·4	67·0	66·0	13·2	23·0	2·3	+ 1·1	W	NW	3·0	0·0	0·2	150	329	0·03
3	..	29·762	72·0	53·0	60·7	48·1	125·0	47·5	67·0	66·0	12·6	22·4	5·2	— 0·7	NW	SW	2·0	0·0	0·1	125	251	0·00
4	..	29·324	67·0	50·7	57·3	52·1	107·0	47·5	66·6	65·6	5·2	12·7	0·8	— 4·2	SW	SW	3·0	0·0	0·3	160	310	0·05
5	Greatest Declination N.	29·198	68·6	51·7	58·6	51·0	105·8	45·0	66·6	65·6	7·6	16·6	1·4	— 3·0	SW	SW	4·0	0·0	0·9	150	295	0·06
6	..	29·309	72·5	50·7	59·7	52·4	107·0	45·0	66·0	65·0	7·3	21·1	1·2	— 2·0	SW	SW; SE	2·0	0·0	0·3	75	181	0·03
7	..	29·449	72·5	56·3	62·8	56·5	94·8	..	65·7	64·7	6·3	13·0	4·4	+ 1·0	SE; NW	W	1·0	0·0	0·0	105	215	0·80
8	New	29·567	76·3	53·6	61·3	54·5	122·0	50·0	66·0	65·0	6·8	13·7	1·7	— 0·4	W	SW	0·0	0·0	0·0	65	149	0·02
9	..	29·752	73·9	51·8	62·1	53·7	125·0	47·0	66·0	65·0	8·4	19·4	1·8	+ 0·6	N	NW	1·0	0·0	0·0	120	215	0·00
10	..	29·802	74·3	52·4	60·7	54·3	127·0	49·5	66·0	65·0	6·4	19·8	1·9	— 0·8	W	W	1·0	0·0	0·0	130	251	0·01
11	..	29·733	72·3	48·4	59·3	50·0	115·0	42·0	66·0	65·0	9·3	19·8	2·1	— 2·3	W	SW	1·5	0·0	0·1	135	256	0·00
12	In Equator	29·506	72·2	49·1	60·9	54·2	110·0	43·0	66·5	65·5	6·7	18·2	2·1	— 0·8	SW	SE; NE	0·0	0·0	0·0	65	144	0·00
13	..	29·381	74·3	57·3	63·3	55·0	123·0	50·7	66·5	65·5	8·3	21·8	1·9	+ 1·5	S	SE; E	0·0	0·0	0·0	95	201	0·22
14	..	29·453	72·9	56·4	61·7	54·7	123·0	54·0	66·5	65·5	7·0	18·9	2·4	0·0	SW	SW; SE	2·5	0·0	0·2	75	160	0·25
15	First Qr.	29·499	73·5	55·5	61·1	56·1	129·0	50·0	66·0	65·0	5·0	14·4	1·6	— 0·6	Calm	SW	0·5	0·0	0·0	100	195	0·04
16	Perigee	29·556	75·3	53·7	62·1	55·1	107·0	49·8	66·0	65·0	7·0	15·5	1·4	+ 0·4	SW	SW; W	2·5	0·0	0·1	140	274	0·02
17	..	29·764	73·0	48·8	60·6	52·9	121·0	43·8	66·4	65·4	7·7	17·1	1·9	— 1·1	W	SW	2·0	0·0	0·2	185	362	0·00
18	..	29·598	69·8	56·0	61·0	51·9	116·0	51·0	66·6	65·6	9·1	15·3	5·2	— 0·7	SW	SW	5·0	0·0	0·8	205	401	0·00
19	Greatest Declination S.	29·573	65·8	55·3	59·6	56·5	92·0	49·8	66·6	65·6	3·1	9·4	0·4	— 2·1	SW	SW	3·5	0·0	0·6	195	348	0·01
20	..	29·572	73·8	59·0	63·0	59·7	96·0	57·0	66·0	65·0	3·3	7·4	1·1	+ 1·4	SW	SW	2·0	0·0	0·1	130	269	0·08
21	..	29·626	71·8	55·5	61·9	57·4	100·0	51·8	66·0	65·0	4·5	10·3	2·0	+ 0·4	SW	SW	2·0	0·0	0·2	150	291	0·06
22	Full	29·613	70·2	55·8	61·8	55·1	127·0	50·2	65·5	64·5	6·7	12·4	1·8	+ 0·3	SW	SW	3·5	0·0	0·4	205	367	0·01
23	..	29·518	72·8	57·2	62·4	53·3	110·0	52·7	65·5	64·5	9·1	20·2	2·3	+ 0·9	SW	SW	3·0	0·0	0·5	135	297	0·00
24	..	29·649	67·5	51·3	58·2	56·8	82·0	45·0	65·0	64·0	1·4	7·3	0·0	— 3·4	SW	SW	3·0	0·0	0·3	190	376	0·06
25	In Equator	29·525	71·3	59·5	63·7	60·0	109·8	55·0	65·0	64·0	3·7	7·9	1·5	+ 1·9	SW	SW	5·0	0·0	2·0	200	395	0·05
26	..	29·464	71·2	56·5	59·9	54·1	105·0	52·7	65·0	64·0	5·8	9·3	2·2	— 2·2	W	SW; W	3·5	0·0	0·5	135	269	0·32
27	..	29·601	73·3	49·8	59·6	51·4	125·0	47·5	64·8	63·8	8·2	17·5	1·7	— 2·7	WSW	SW	2·0	0·0	0·0	105	217	0·01
28	..	29·767	73·0	50·5	59·4	53·8	125·0	49·0	65·0	64·0	5·6	13·9	1·8	— 3·1	WNW	W	2·5	0·0	0·1	135	268	0·05
29	Apogee; Last Quarter.	29·846	73·0	48·8	59·7	50·9	123·0	45·0	65·0	64·0	8·8	17·1	1·9	— 2·8	SW	SW; S	2·0	0·0	0·0	150	282	0·00
30	..	29·721	72·6	55·5	61·2	51·7	121·0	50·0	65·4	64·4	9·5	19·3	2·0	— 1·3	SW	SW	5·0	0·0	0·8	200	384	0·00
31	..	29·883	73·8	50·7	60·8	53·2	123·0	47·5	65·7	64·7	7·6	15·1	1·6	— 1·7	SW	SW	3·0	0·0	0·4	175	336	0·00
Means	..	29·606	72·3	53·4	60·9	53·7	114·5	48·7	66·0	65·0	7·2	15·9	2·0	— 0·8	...	...	..	..	..	Sum 4335	Sum 8597	Sum 2·18

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·032 on the 1st; the absolute minimum in the month was 29in·170 on the 5th.
The second maximum ,, was 29in·813 on the 10th; the second minimum ,, was 29in·338 on the 13th.
The third maximum ,, was 29in·788 on the 17th; the third minimum ,, was 29in·539 on the 20th.
The fourth maximum ,, was 29in·651 on the 22nd; the fourth minimum ,, was 29in·446 on the 23rd.
The fifth maximum ,, was 29in·708 on the 24th; the fifth minimum ,, was 29in·397 on the 26th.
The sixth maximum ,, was 29in·920 on the 29th; the sixth minimum ,, was 29in·687 on the 30th.
The range in the month was 0in·862.
The mean for the month was 29in·606, being 0in·198 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 76°·3 on the 1st and 8th; the lowest was 48°·4 on the 11th; and the range in the month was 27°·9.
The mean ,, of all the highest daily readings was 72°·3, being 1°·5 *lower* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 53°·4, being 0°·2 *higher* than the average of the preceding 20 years.
The mean daily range was 18°·9, being 1°·7 *less* than the average of the preceding 20 years.
The mean for the month was 60°·9 being 1°·0 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
July 1	o	o : s	2, ci	2, ci
2	o : w	w : o	10, r : 9, li.-cl	7, cu, ci.-cu, ci
3	o	w	7, cu, ci.-cu, ci	10, cu, ci.-cu, ci
4	m	o	10, ci.-s	10, oc.-r : ci.-cu, ci.-s, r : ci.-s
5	s **N**	o	7, cu, cu.-s : shs.-r	7, li.-cl : o
6	o	o	7, li.-cl, oc.-r	7, li.cl : oc.-r : 10
7	o	o	10, h.-r : v	10 : l, t, h.-r : 7, ci.-s
8	o	o : s	7, cu, ci.-cu, ci	10 : t, shs.-r
9	o	o : m	10, ci.-cu, ci.-s	3, ci, h : 8, ci.-s
10	o	o : m	10, oc.-r	10, h.-shs.-r : 8, cu, ci.-cu, ci : 5, ci.-s : o
11	o	o : s	9, ci.-cu, ci.-s, li.-cl	5, li.-cl : o
12			10	10, li.-cl : 2, r
13			10	10, oc.-r : 7
14			10	10, r : 5
15			10, r : 10, oc.-r	7, cu, ci.-cu, ci
16			10, oc.-r : 5, cu, ci.-cu, ci	10, h.-sh.-r : t : 10
17	o	o : w	7, cu, ci.-cu, ci	7, cu, ci.-cu, ci : 10
18	w	m **N** : m	10, ci.-s	10, cu, ci.-s, sc
19	o	o	10, oc.-r	10, oc.-r
20	o	o : sN, sP, sps, g cur : o	10, ci.-s : oc.-shs.-r	9 : 10, t
21	s **N**	o : m	10, cu, cu.-s, ci.-s, shs.-r	10, cu.-s, ci.-s, shs.-r : o
22	w	w	7, li.-cl : h.-sh.-r	7, cu, ci.-cu, ci, sh.-r : 10, cu.-s, ci.-s
23	o	o : w	5, cu, ci.-cu, ci	10, ci.-cu, ci.-s : o
24	w	o	10 : oc.-r	7, li.-cl : 10, h.-r
25	o	o	10, oc.-r : 3, ci.-s, sc : 10, oc.-r	10, oc.-r
26	o	s **N**, s **P**, sps, g cur	10, h.-r : 9, cu.-s, ci.-s, h.-sh.-r	10, l, t, h.-r : 10, h.-sh.-r
27	s **N**, s **P**, sps, g cur	s **N**, s **P**, sps, g cur	5, li.-cl	5, cu, ci.-cu, t, r : o
28	m	o	10, r : 7, cu, ci.-cu, ci	7, cu, cu.-s, ci.-s : 3, ci.-cu, ci
29	o	v	7, ci.-cu, ci.-s	8, li.-cl
30	s	o : s	7, ci.-cu, ci.-s	7, li.-cl : 10 : 3, ci.-s, oc.-r
31	v	v	3, li.-cl	8, cu, ci.-cu, ci : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 63°·0 on the 25th ; and the lowest was 47°·0 on the 2nd and 3rd.

The mean ,, was 53°·7, being 0°·2 *lower* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·413, being 0^{in}·004 *less* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·6, being the same as the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100), being 2 *greater* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 526 grains, being 2 grains *less* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·4.

WIND.

The proportions were of N. 1, S. 12, W. 17, and E. 1. The greatest pressure in the month was 51^{lb}·0 on the square foot on the 18th, 25th, and 30th.

RAIN.

Fell on 20 days in the month, amounting to 2^{in}·2, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·5 *less* than the average fall of the preceding 46 years.

ELECTRICITY.—The insulating lamp was not burning from July 12 to July 16.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Whewell's / Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Aug. 1	..	29·906	76·8	55·8	63·6	54·0	121·0	51·7	65·7	64·7	9·6	22·4	1·6	+ 1·1	SW	SW	1·5	0·0	0·0	105	223	0·00
2	Greatest Declination N.	29·593	80·0	50·5	63·5	55·8	127·0	47·5	66·0	65·0	7·7	24·2	1·8	+ 1·2	S	SW	3·0	0·0	0·1	200	372	0·05
3	..	29·744	67·3	54·0	58·7	51·5	97·0	50·0	66·0	65·0	7·2	13·7	3·2	— 3·5	SW	SW	8·0	0·0	2·0	245	500	0·00
4	..	29·884	75·5	57·0	63·3	56·5	112·0	54·0	65·7	64·7	6·8	12·6	4·6	+ 1·2	SW	SW	3·5	0·0	1·3	170	324	0·00
5	..	29·767	80·4	53·7	66·1	55·2	135·0	49·8	66·0	65·0	10·9	25·2	1·6	+ 4·1	SW	SW	2·0	0·0	0·3	165	345	0·00
6	New	29·930	76·4	53·1	63·0	52·7	125·0	47·4	66·0	65·0	10·3	24·1	2·8	+ 1·0	W	W W	2·0	0·0	0·1	80	210	0·00
7	..	29·813	78·3	50·7	62·8	55·9	127·0	42·8	66·0	65·0	6·9	16·8	1·6	+ 0·8	SW	SW	2·0	0·0	0·2	175	345	0·00
8	..	29·565	70·0	58·1	63·0	61·0	95·0	..	66·0	65·0	2·0	6·1	0·8	+ 1·0	SW	W	4·0	0·0	1·0	185	374	0·31
9	In Equator	29·776	76·0	57·2	64·7	61·2	107·0	52·3	65·5	64·5	3·5	8·5	2·5	+ 2·8	W	W	3·5	0·0	0·5	160	327	0·01
10	Perigee	29·927	81·3	59·5	68·2	58·7	134·0	52·3	65·5	64·5	9·5	22·6	2·0	+ 6·4	W	SW	0·0	0·0	0·0	110	219	0·00
11	..	29·817	79·3	57·5	67·7	60·7	132·0	..	66·0	65·0	7·0	18·2	0·2	+ 6·0	SW	SW	1·5	0·0	0·0	101	207	0·00
12	..	29·610	89·3	57·0	72·9	63·1	138·8	50·2	66·7	65·7	9·8	25·9	1·1	+11·3	SW	SW	1·5	0·0	0·1	144	288	0·00
13	First Qr.	29·812	81·2	60·8	67·0	55·9	123·0	52·7	67·5	66·5	11·1	24·8	3·4	+ 5·5	SW ; NW	NW ; N	2·0	0·0	0·1	53	163	0·03
14	..	29·838	79·0	50·8	64·2	54·6	124·0	43·0	67·5	66·5	9·6	24·0	1·6	+ 2·7	Calm ; SW	SW	1·0	0·0	0·0	146	301	0·00
15	Greatest Declination S.	29·671	73·5	60·4	65·0	62·3	107·0	55·0	67·0	66·0	2·7	6·7	0·2	+ 3·6	SW	SW	1·0	0·0	0·0	101	207	0·03
16	..	29·710	64·7	56·3	59·4	57·7	82·0	50·0	67·0	66·0	1·7	5·6	0·4	— 2·0	SW	SW	0·0	0·0	0·0	80	179	0·11
17	..	29·899	74·3	49·8	60·8	51·6	126·0	..	67·0	66·0	9·2	20·7	1·9	— 0·5	W	SW	1·0	0·0	0·1	120	260	0·00
18	..	29·819	75·0	52·9	63·8	52·2	112·0	48·0	67·0	66·0	11·6	21·1	1·4	+ 2·7	SW	SW	3·0	0·0	0·4	165	328	0·00
19	..	29·808	75·5	55·5	63·5	51·2	127·0	50·0	67·0	66·0	12·3	20·6	4·2	+ 2·6	W	W	3·0	0·0	0·3	175	355	0·00
20	Full	29·933	73·5	50·1	59·4	50·9	112·0	42·5	66·6	65·6	8·5	17·8	1·9	— 1·4	W	NW	2·0	0·0	0·0	105	238	0·00
21	..	30·068	69·5	47·3	58·3	50·8	107·0	39·8	66·0	65·0	7·5	15·7	2·5	— 2·3	NW	W ; NW	0·0	0·0	0·0	40	176	0·01
22	In Equator	30·089	69·7	49·3	59·9	53·3	111·0	39·8	65·7	64·7	6·6	14·6	4·0	— 0·5	W	SW	2·0	0·0	0·1	180	366	0·01
23	..	29·937	76·3	57·7	64·1	55·3	118·0	55·0	65·7	64·7	8·8	18·4	1·7	+ 3·8	W	NW ; N	2·0	0·0	0·3	130	296	0·00
24	..	29·946	71·0	51·9	59·3	49·3	107·0	43·5	65·4	64·4	10·0	23·2	3·0	— 1·0	N	NW	5·0	0·0	0·8	150	336	0·03
25	..	30·029	71·0	48·8	59·0	50·6	100·2	40·4	66·5	65·5	8·4	21·8	2·8	— 1·2	NW	W	1·0	0·0	0·0	125	279	0·00
26	Apogee	30·066	72·9	54·8	60·7	54·2	109·0	45·5	66·5	65·5	6·5	12·4	2·9	+ 0·8	W	NW ; Calm	1·0	0·0	0·0	30	172	0·00
27	..	30·104	78·8	53·5	65·4	58·4	117·0	49·8	66·0	65·0	7·0	15·3	3·2	+ 5·7	W	Calm	0·0	0·0	0·0	20	128	0·00
28	Last Qr.	29·837	80·0	51·3	65·5	55·4	128·0	43·0	65·7	64·7	10·1	21·2	4·2	+ 5·9	Calm	S	1·0	0·0	0·0	35	177	0·00
29	Greatest Declination N	29·785	77·0	53·7	63·4	56·2	115·0	49·6	65·4	64·4	7·2	18·4	1·3	+ 4·0	W	WSW	1·0	0·0	0·1	155	325	0·00
30	..	30·037	74·3	53·5	62·4	52·5	111·0	50·0	65·0	64·0	9·9	18·5	3·4	+ 3·3	WSW	W	2·0	0·0	0·2	80	217	0·00
31	..	30·109	77·3	46·2	60·8	52·0	126·0	39·7	65·0	64·0	8·8	19·1	2·1	+ 1·8	SW	SW	0·0	0·0	0·0	5	119	0·00
Means	..	29·865	75·6	53·8	63·2	55·2	116·5	47·7	66·1	65·2	8·0	18·1	2·3	+ 2·2	...	...	..	..	..	Sum 3735	Sum 8356	Sum 0·59

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month	was 29in·936 on the 1st ;	the first minimum in the month	was 29in·544 on the 2nd.
The second maximum	,, was 29in·897 on the 4th ;	the second minimum	,, was 29in·740 on the 5th.
The third maximum	,, was 29in·953 on the 6th ;	the absolute minimum	,, was 29in·532 on the 8th.
The fourth maximum	,, was 29in·945 on the 10th ;	the fourth minimum	,, was 29in·595 on the 12th.
The fifth maximum	,, was 29in·917 on the 13th ;	the fifth minimum	,, was 29in·654 on the 15th.
The sixth maximum	,, was 29in·969 on the 17th ;	the sixth minimum	,, was 29in·759 on the 18th.
The seventh maximum	,, was 30in·139 on the 22nd ;	the seventh minimum	,, was 29in·921 on the 23rd.
The eighth maximum	,, was 30in·137 on the 27th ;	the eighth minimum	,, was 29in·708 on the 28th.
The absolute maximum	,, was 30in·165 on the 31st.		

The range in the month was 0in·633.

The mean for the month was 29in·865, being 0in·077 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 89°·3 on the 12th ; the lowest was 46°·2 on the 31st ; and the range in the month was 43°·1.

The mean ,, of all the highest daily readings was 75°·6, being 2°·8 *higher* than the average of the preceding 20 years.

The mean ,, of all the lowest daily readings was 53°·8, being 0°·4 *higher* than the average of the preceding 20 years.

The mean daily range was 21°·8, being 2°·4 *greater* than the average of the preceding 20 years.

The mean for the month was 63°·2, being 1°·9 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Aug. 1	v	v	10, r : 7, ci.-cu, ci.-s	9, li.-cl : 7, cu, ci.-cu
2	s	w	9, li.-cl : 7, ci.-cu, ci.-s	5, ci.-cu, ci.-s, shs.-r : l
3	o	o : w	10 : oc.-r	10 : oc.-r
4	o	m	10	7, ci.-cu : o : 7, s, ci.-s
5	o	o : w	3, cu, ci.-cu, ci : o	o : 10
6	s	o : s	2, li.-cl	2, li.-cl : o
7	s	s	5, li.-cl	7, cu, ci.-cu, ci : o : 10, l, r
8	s N, sps, g cur	o	10, r : 10, oc.-r	10, oc.-r : 7, cu.-s, ci.-s, oc.-r
9	o	o	10	10, th.-r : v : 10, m.-r
10	o	v	2, ci, li.-cl	2, ci.-cu, ci : 10 : 7
11	m	m	5, ci.-cu, ci.-s	2, ci.-cu, li.-cl : 10, ci.-s
12	s	w	o	o
13	w	w	10, sl.-r : 10	7, cu, ci.-cu, ci
14	v	v	10, li.-cl	7, ci.-cu, ci.-s : o
15	m	o	10 : 10, r	10 : o
16			10, r	10, r : o : 10, cu.-s, ci.-s
17			2, li.-cl	7, li.-cl : 10
18			o : 8, cu.-s, ci.-s : o	o
19			7, ci.-cu, ci.-s, ci : o	o
20			5, li.-cl	6, li.-cl : o
21	v	v	7, li.-cl	7, li.-cl : 10, r : o, h
22	s	s	3, li.-cl	10
23	v	v	10, sl.-r : 2, ci.-cu, ci	3, cu, ci.-cu, ci
24	o	o	10, li.-cl	10, ci.-cu, ci.-s : o
25			10	7, li.-cl, h
26			10	7 : o
27			o	7, cu, ci.-cu, ci : o, h
28			5, ci.-cu, ci.-s	3, li.-cl : o : 7, li.-cl
29			10	7, ci.-cu, ci.-s : o
30			9, s, ci.-s	8, li.-cl : o
31	v	v	o	o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 66°·4 on the 12th; and the lowest was 47°·9 on the 19th.
The mean ,, ,, was 55°·2, being 1°·1 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}·436$, being $0^{in}·014$ *greater* than the average of the preceding 20 years.
Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{gr}·9$, being $0^{gr}·2$ *greater* than the average of the preceding 20 years.
Degree of Humidity.—The mean for the month was 76 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 20 years.
Weight of a Cubic Foot of Air.—The mean for the month was 528 grains, being the *same* as the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 5·9.

WIND.

The proportions were of N. 3, S. 10, W. 18, and E. o. The greatest pressure in the month was $8^{lbs}·0$ on the square foot on the 3rd.

RAIN.

Fell on 9 days in the month, amounting to $0^{in}·6$, as measured in the simple cylinder gauge partly sunk below the ground; being $1^{in}·8$ *less* than the average fall of the preceding 46 years.

ELECTRICITY.—August 16 to 20 and August 25 to 30. The insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day. Whewell's	Amount of Horizontal Movement of the Air on each Day. Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Sept. 1	..	29·888	81·1	53·5	66·1	53·1	127·0	49·0	65·5	64·5	13·0	28·8	2·2	+ 7·3	S ; SW	SW	0·0	0·0	0·0	80	191	0·00
2	..	29·779	78·5	53·7	64·6	53·2	125·0	43·7	66·0	65·0	11·4	27·5	2·2	+ 6·0	W	NW ; SW	0·0	0·0	0·0	75	221	0·00
3	..	29·642	72·6	55·7	61·8	56·9	116·0	49·0	66·0	65·0	4·9	13·0	2·3	+ 3·3	SW	WSW	4·0	0·0	0·4	170	355	0·04
4	New.	29·809	68·7	51·8	59·8	55·1	87·0	42·5	65·7	64·7	4·8	11·0	1·5	+ 1·4	WSW	SW	3·0	0·0	0·3	175	347	0·00
5	In Equator	29·878	79·6	58·1	66·0	57·2	118·0	50·0	65·4	64·4	8·8	16·2	1·3	+ 7·8	WSW	SW	1·0	0·0	0·0	120	283	0·00
6	..	29·630	72·1	51·0	60·1	57·2	96·0	56·3	65·0	64·0	2·9	9·5	0·4	+ 2·1	SW	WSW	3·0	0·0	0·3	180	362	0·07
7	Perigee.	29·804	68·8	49·8	58·1	48·9	109·0	43·6	65·0	64·0	9·2	19·6	1·9	+ 0·3	W	NW ; WSW	5·0	0·0	1·0	160	319	0·00
8	..	29·880	70·0	45·4	58·1	51·2	102·2	37·3	65·0	64·0	6·9	16·7	1·3	+ 0·4	SW	SW	1·0	0·0	0·0	90	285	0·00
9	..	29·791	72·6	54·3	61·7	51·1	125·0	47·0	65·0	64·0	10·6	19·3	1·8	+ 4·1	SW	NW	0·0	0·0	0·0	30	146	0·07
10	..	29·785	71·0	49·4	57·7	46·9	126·0	41·1	65·0	64·0	10·8	18·5	0·0	+ 0·2	NNE	NE ; Calm	0·0	0·0	0·0	20	99	0·00
11	First Quarter ; Greatest Dec. S.	29·835	70·2	39·2	54·1	48·8	116·0	32·6	64·7	63·7	5·3	17·6	1·6	— 3·3	Calm	Calm	0·0	0·0	0·0	15	76	0·00
12	..	29·988	74·3	41·5	57·5	52·0	122·0	38·7	64·7	63·7	5·5	15·7	1·2	+ 0·2	Calm	SW	0·0	0·0	0·0	15	177	0·00
13	..	29·823	61·8	51·3	55·5	51·2	75·0	43·6	64·5	63·5	4·3	10·8	1·6	— 1·7	SW	SW	5·0	0·0	0·5	220	448	0·07
14	..	29·570	67·2	47·0	56·1	47·9	116·0	43·6	64·0	63·0	8·2	19·1	1·8	— 0·9	WSW	WSW	6·0	0·0	2·0	180	406	0·01
15	..	29·607	60·1	46·0	52·5	46·7	95·0	38·8	..	..	5·8	14·0	0·2	— 4·2	W	WNW	4·0	0·0	0·4	150	343	0·02
16	..	29·834	64·0	49·4	55·1	46·4	102·2	40·0	..	..	8·7	16·2	4·0	— 1·4	WNW ; N	N	3·0	0·0	0·2	105	289	0·01
17	..	30·013	65·0	44·5	53·0	47·5	100·8	38·0	..	..	5·5	15·5	3·1	— 3·3	NW	N	0·0	0·0	0·0	..	113	0·00
18	In Equator.	30·050	69·7	39·4	54·5	47·9	111·0	35·0	..	..	6·6	20·0	2·2	— 1·5	SW	SW	0·0	0·0	0·0	30	149	0·00
19	Full.	29·960	71·8	47·5	57·3	49·4	118·0	41·0	..	..	7·9	22·8	0·4	+ 1·4	WSW	SW	0·0	0·0	0·0	70	226	0·00
20	..	29·705	67·3	46·0	54·6	50·7	101·0	43·0	..	..	3·9	10·3	1·0	— 1·0	SW	WSW	3·0	0·0	0·1	105	244	0·03
21	..	29·568	62·8	44·4	53·7	48·6	111·0	36·0	..	..	5·1	12·2	0·8	— 1·8	SW	SW	2·0	0·0	0·0	165	346	0·19
22	Apogee.	29·380	59·3	49·5	55·3	51·2	79·0	45·0	..	..	4·1	7·0	1·1	— 0·1	SW	Calm	1·0	0·0	0·0	165	346	0·14
23	..	29·273	65·2	51·5	55·7	47·3	115·5	53·0	..	..	8·4	13·3	3·6	+ 0·4	W	SW	6·0	0·0	2·0	205	404	0·28
24	..	29·287	66·0	46·5	54·7	48·4	113·0	38·8	58·0	56·0	6·3	16·9	1·4	— 0·3	SW	SW	4·0	0·0	0·5	145	281	0·21
25	..	29·166	57·0	47·0	50·6	48·6	81·0	41·5	58·0	55·0	2·0	4·2	0·0	— 4·3	SW	S ; NW	0·0	0·0	0·0	70	172	0·28
26	Greatest Declination N.	29·584	59·1	45·2	51·5	46·0	91·5	40·0	57·5	55·0	5·5	10·8	0·6	— 3·2	NW	NW ; SW	0·0	0·0	0·0	60	141	0·00
27	Last Qr.	29·807	66·2	37·7	52·8	48·6	110·0	31·8	58·0	56·0	4·2	14·1	1·6	— 1·7	SW	SW ; S	1·0	0·0	0·0	145	273	0·00
28	..	29·716	63·8	50·8	55·7	52·1	81·5	45·2	57·5	56·0	3·6	9·9	0·4	+ 1·4	SW	SW	3·0	0·0	0·5	140	271	0·01
29	..	29·763	69·3	50·7	58·0	52·9	116·2	48·0	57·5	56·5	5·1	15·1	0·0	+ 4·0	SW	SW ; S	2·0	0·0	0·0	80	163	0·06
30	..	29·713	74·0	49·0	61·5	55·2	120·5	42·8	57·5	56·5	6·3	18·5	3·6	+ 7·7	SE	SE ; SSW	0·5	0·0	0·0	80	159	0·00
Means	..	29·717	68·3	48·2	57·1	50·6	106·9	42·5	62·6	61·4	6·5	15·5	1·5	+ 0·6	...	...	..	..	..	Sum 3245	Sum 7635	Sum 1·49

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·898 on the 5th ; the first minimum in the month was 29in·612 on the 3rd.
The second maximum ,, was 29in·929 on the 8th ; the second minimum ,, was 29in·612 on the 6th.
The third maximum ,, was 30in·038 on the 12th ; the third minimum ,, was 29in·780 on the 9th.
The absolute maximum ,, was 30in·079 on the 18th ; the fourth minimum ,, was 29in·544 on the 14th.
The fifth maximum ,, was 29in·841 on the 27th ; the absolute minimum ,, was 29in·149 on the 25th.
The sixth maximum ,, was 29in·841 on the 29th ; the sixth minimum ,, was 29in·667 on the 28th.
The range in the month was 0in·930.
The mean for the month was 29in·717, being 0in·112 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 81°·1 on the 1st ; the lowest was 37°·7 on the 27th ; and the range in the month was 43°·4.
The mean ,, of all the highest daily readings was 68°·3, being 0°·9 *higher* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 48°·2, being 0°·7 *lower* than the average of the preceding 20 years.
The mean daily range was 20°·1, being 1°·6 *greater* than the average of the preceding 20 years.
The mean for the month was 57°·1, being 0°·2 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Sept. 1			0	0
2			7, ci.-s, h	0 : 7
3			10, th.-r	7, li.-cl : 5, ci.-s
4			10	10 : 5, ci.-s : 0
5			5, li.-cl	5, ci.-cu, ci.-s : 0
6			10	10, h.-r : 0
7	v	v	10, li.-cl	10, ci.-cu, ci.-s, sc : 7, ci.-s, h
8	m	m	10, ci.-cu, ci.-s	10, ci.-cu, ci.-s, ci
9	0	0 : s	10, h.-r : 9, cu, cu.-s, ci.-s	9, li.-cl : 7, s, ci.-s, h
10	v	v	0, h	7, cu, ci.-cu, ci : 0
11	s	s	0, h	0 : 0, h
12	s	w : s	5, ci.-cu, ci.-s, f	2, li.-cl : 9, li.-cl : 0
13	0	w N : 0	10, h.-r	10, r : 7
14	0	w N : 0	0	10, ci.-s, sc : 0
15			10, cu.-s, ci.-s	10, oc.-r
16			5, ci.-cu, ci	10, cu.-s, ci.-s : 5, ci.-s : 0
17			10, f	10, li.-cl
18	s	s : w	0, f : 3, li.-cl	2, ci, h : 10, li.-cl
19	m	m : s	0, h	7, cu, ci.-cu, h : 0, h : 3, lu.-ha
20	0	0 : s	10, th.-r	8, oc.-r : 9, ci.-s, h, lu.-ha, lu.-cor
21	0	s N, sps : 0	7, ci.-cu, ci.-s	10, oc.-r : h.-r : cu.-s, ci.-s
22	s	s	10, h.-r	10, s, r : 10
23			10, h.-r : 5, ci.-cu, ci	5, ci.-cu, ci.-s
24			0 : 6, ci.-cu, ci.-s, ci	4, ci.-cu, ci : 10, s, ci.-s, h.-r : 10
25			10, r	7, ci.-s, li.-cl, r : 10 : 5, ci.-s, f
26			10, f	10, cu.-s ci.-s : 0
27	m	m : s	0, f	7, ci.-cu, ci : 1, f
28	m	m : 0	10	10, ci.-s : 10, r
29	v	v	10, r : 3, cu, ci.-cu	5 : 0
30	m	m	10, ci.-cu, ci, li.-cl	10 : 5 : 10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 62°·8 on the 6th; and the lowest was 45°·4 on the 18th and 20th.

The mean ,, was 50°·6, being 0°·5 *lower* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·369, being 0^{in}·013 *less* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·1, being 0^{gr}·1 *less* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 79 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 532 grains, being 2 grains *less* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·3.

WIND.

The proportions were of N. 2, S. 10, W. 16, and E. 2. The greatest pressure in the month was 6^{lbs}·0 on the square foot on the 14th and 23rd.

RAIN.

Fell on 15 days in the month, amounting to 1^{in}·5, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·0 *less* than the average fall of the preceding 20 years.

ELECTRICITY.—September 1 to 6, 15 to 17 and 23 to 26. The insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day. Wheewell's.	Amount of Horizontal Movement of the Air on each Day. Robinson's.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Oct. 1	..	29·575	72·5	57·5	64·3	60·2	106·0	52·0	60·0	57·0	4·1	11·5	0·8	+10·8	Calm	SW	0·0	0·0	0·0	65	147	0·09
2	In Equator	29·817	66·3	51·0	57·6	51·6	99·0	49·0	60·0	57·0	6·0	12·1	1·8	+ 4·2	SW ; N	NW ; N	0·0	0·0	0·0	35	93	0·00
3	..	30·000	68·5	48·3	57·5	54·6	109·3	42·0	60·0	58·0	2·9	14·6	0·0	+ 4·4	Calm	SE	0·0	0·0	0·0	65	144	0·00
4	New	29·956	70·6	50·0	58·6	51·9	117·6	49·0	60·5	58·0	6·7	19·4	3·2	+ 5·6	SE	SE	0·0	0·0	0·0	75	156	0·00
5	Perigee	29·886	68·2	49·2	57·5	56·7	92·0	43·0	59·0	58·0	0·8	6·7	0·0	+ 4·7	SE ; S	Calm	0·0	0·0	0·0	40	105	0·03
6	..	30·021	59·0	55·4	56·0	54·8	62·8	52·0	59·0	58·0	1·2	2·3	0·6	+ 3·5	NE	Calm	0·0	0·0	0·0	25	99	0·08
7	..	29·885	70·0	54·0	60·6	60·0	105·0	50·0	59·0	58·0	0·6	7·6	0·0	+ 8·3	SE	Calm	0·0	0·0	0·0	5	67	0·00
8	Greatest Declination S.	29·688	75·6	50·3	62·1	59·9	115·0	45·0	59·0	58·0	2·2	13·0	1·5	+10·0	SW	SW	0·0	0·0	0·0	105	213	0·00
9	..	29·796	69·3	49·0	58·2	56·1	110·0	47·0	60·0	59·0	2·1	12·8	0·4	+ 6·3	SW	SW	0·0	0·0	0·0	50	120	0·04
10	First Qr.	29·694	68·0	45·9	56·5	54·4	105·0	43·6	60·0	59·0	2·1	11·5	0·0	+ 4·8	Calm	SE	2·0	0·0	0·0	135	261	0·00
11	..	29·346	71·0	50·0	58·0	54·7	109·0	46·0	60·0	59·0	3·3	14·2	1·1	+ 6·6	SW	SW	6·0	0·0	0·5	190	375	0·43
12	..	29·843	62·7	48·3	56·4	52·3	82·0	45·0	60·0	59·0	4·1	11·6	2·0	+ 5·4	SW	SW	5·0	0·0	1·0	180	350	0·00
13	..	29·796	68·0	53·7	59·6	52·1	110·0	46·3	60·0	58·5	7·5	15·5	2·0	+ 9·1	SW	SW	4·0	0·0	0·4	135	300	0·00
14	..	29·901	74·3	54·0	62·3	55·9	110·0	52·4	60·0	58·5	6·4	16·8	0·6	+12·2	SW	SW ; SE	1·0	0·0	0·0	50	65	0·00
15	In Equator	29·960	71·6	47·8	57·5	53·8	115·0	42·0	60·0	58·5	3·7	16·9	0·0	+ 7·7	SE ; Calm	SE	0·0	0·0	0·0	35	102	0·00
16	..	30·114	57·2	48·0	52·2	49·7	65·0	46·5	59·5	58·5	2·5	6·8	1·2	+ 2·6	NE	NE	1·0	0·0	0·1	85	185	0·00
17	..	30·135	61·0	39·9	50·2	44·8	102·6	31·0	59·5	57·5	5·4	16·0	0·7	+ 0·8	NE	NE	0·0	0·0	0·0	45	127	0·01
18	Full	29·972	60·2	42·7	50·2	45·4	105·7	37·8	59·0	57·0	4·8	12·5	0·9	+ 1·0	NE	ESE	1·0	0·0	0·0	55	138	0·00
19	..	29·788	63·0	40·8	50·1	47·3	106·0	32·0	59·0	57·5	2·8	11·6	0·0	+ 1·0	ESE	ESE	1·5	0·0	0·0	50	125	0·00
20	Apogee	29·723	58·2	43·4	51·3	51·3	65·3	36·0	57·0	55·0	0·0	1·3	0·0	+ 2·2	Calm	Calm	0·0	0·0	0·0	25	86	0·00
21	..	29·608	63·5	46·9	54·7	51·8	103·4	40·4	57·5	55·0	2·9	11·6	1·8	+ 5·8	SE	SE ; SW	1·0	0·0	0·0	100	193	0·01
22	..	29·670	61·7	48·3	53·9	52·8	86·0	42·5	57·0	55·0	1·1	4·4	0·5	+ 5·3	SSE	S	2·0	0·0	0·1	125	249	0·16
23	Greatest Declination N.	29·901	59·0	46·8	51·9	46·1	102·0	40·3	57·0	55·0	5·8	10·3	3·8	+ 3·6	SW	S	5·0	0·0	0·3	115	220	0·01
24	..	29·906	64·2	49·5	56·4	53·2	95·0	46·5	57·0	55·0	3·2	7·4	1·0	+ 8·5	S	SSW	2·0	0·0	0·5	130	239	0·00
25	..	29·970	64·0	55·5	58·6	57·0	73·0	51·0	56·5	55·0	1·6	4·0	0·8	+11·1	SW	Calm	0·0	0·0	0·0	45	115	0·03
26	Last Qr.	30·001	60·1	46·0	52·2	48·3	105·0	46·3	56·7	55·0	3·9	9·3	1·9	+ 4·8	ENE	ENE	1·0	0·0	0·0	70	164	0·00
27	..	29·927	58·6	40·5	48·9	44·0	92·3	30·7	56·5	55·0	4·9	13·3	1·0	+ 1·7	ENE	NE	2·0	0·0	0·1	110	255	0·00
28	..	29·967	53·7	41·1	47·0	41·4	97·0	35·3	56·0	54·0	5·6	13·2	2·9	0·0	NE	NE	3·0	0·0	0·3	90	222	0·00
29	..	29·843	54·8	39·6	46·8	43·4	98·0	30·3	56·0	53·0	3·4	8·6	2·5	0·0	NE	NE	2·0	0·0	0·2	130	287	0·00
30	In Equator	29·798	54·7	43·1	47·6	43·3	92·0	35·2	56·0	52·5	4·3	10·2	2·5	+ 1·0	NE	NE	1·0	0·0	0·0	45	125	0·00
31	..	29·615	56·0	43·6	48·3	41·8	79·0	40·6	56·0	52·0	6·5	12·8	1·3	+ 1·8	SW	SSW	0·5	0·0	0·0	120	237	0·00
Means	..	29·842	64·1	47·7	54·9	51·3	97·3	42·8	58·5	56·6	3·6	11·0	1·2	+ 5·0	...	...	..	..	..	Sum 2530	Sum 5564	Sum 0·89

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·019 on the 3rd; the first minimum in the month was 29in·568 on the 1st.
The second maximum ,, was 30in·044 on the 6th; the second minimum ,, was 29in·868 on the 5th.
The third maximum ,, was 29in·863 on the 9th; the third minimum ,, was 29in·664 on the 8th.
The fourth maximum ,, was 29in·903 on the 12th; the absolute minimum ,, was 29in·293 on the 11th.
The absolute maximum .. was 30in·171 on the 17th; the fifth minimum ,, was 29in·771 on the 13th.
The sixth maximum ,, was 30in·030 on the 26th; the sixth minimum ,, was 29in·586 on the 21st.
The range in the month was 0in·878.
The mean for the month was 29in·842, being 0in·152 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 75°·6 on the 8th; the lowest was 39°·6 on the 29th.
The range ,, was 36°·0.
The mean ,, of all the highest daily readings was 64°·1, being 5°·8 *higher* than the average of the preceding 20 years.
The mean ,, of all the lowest daily readings was 47°·7, being 4°·0 *higher* than the average of the preceding 20 years.
The mean daily range was 16°·4, being 1°·8 *greater* than the average of the preceding 20 years.
The mean for the month was 54°·9, being 4°·7 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Oct. 1			9, ci.-cu, ci.-s, ci, r	9, cu.-s, ci.-s : l, t, r
2			7, ci, h	7, cu.-s, ci.-s : o : f
3		v : s, sps	10, th-f : 5, s, ci, li.-cl : o	o
4	w	w : s, g cur	5, ci.-cu, ci : 1, ci	o
5	s	s : w	10, li.-cl, f	10, h, f : 10, r
6	v	v	10, r	10, r : 10
7	s	s	10, th.-f	10, li.-cl, h : th.-f
8	o	o : s	o : 3, li.-cl	3, li.-cl : 5, l
9	s	s	10, r : 7	7, ci.-cu, ci.-s : o, f
10	s, sps, g cur	s, sps, g cur	10, f : o	o : 10 : o
11	o	s N, s P, sps, g cur : w	7, r	10, l, t, h.-r : o
12	m	m	10	10 : a
13	m	m	9, ci.-s, li.-cl	7, s, ci : 10, s, ci.-s, sc
14	v	v	3, ci, li.-cl	o
15	s	s : w	10, th.-f	2, ci, li.-cl : o, f
16	o	w : s	10	10
17	s	m : s, sps	o	7, ci.-cu, ci : 10, th.-r
18	s	m : s	5, ci.-cu, ci	7, cu, ci.-cu, ci : f
19	s	s	10, th.-f : o	o : o, h
20	s	s	10, f	10, f : 7, ci.-cu, cu.-s, ci.-s, f
21	v	v	o	10, cu.-s, ci.-s : oc.-r
22	s N, s P, sps, g cur	v	10, li-cl : h.-r	10, oc.-r : o
23	w	s	10, li.-cl	10, li.-cl : 7, ci.-cu, ci.-s : 10, ci.-s
24	w	w : s	10 : 7, ci.-cu, ci.-s	10 : a
25	o	s	10, r	9, ci.-s : 10, ci.-s
26	s	s	10, li.-cl	7, ci.-cu, ci.-s
27	s	o	o, h	10, ci.-s, h : 7, ci, h
28	m	s	10	10 : 5
29	s	s	10 : 7, li.-cl	10, li.-cl
30	m	m : s	7, li.-cl	10, li.-cl : 10
31	s : o	o	10	o : 5, li.-cl

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 63°·1 on the 7th ; and the lowest was 41°·1 on the 31st.

The mean ,, was 51°·3, being 5°·3 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·378 being 0^{in}·066 *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·2, being 0^{gr}·6 *greater* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 87 (that of Saturation being represented by 100), being the same as the average of the preceding 20 years

Weight of a Cubic Foot of Air.—The mean for the month was 536 grains, being 3 grains *less* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 6·5.

WIND.

The proportions were of N. 6, S. 11, W. 5, and E. 9. The greatest pressure in the month was 6^{lbs}·0 on the square foot on the 11th.

RAIN.

Fell on 10 days in the month, amounting to 0^{in}·9, as measured in the simple cylinder gauge partly sunk below the ground ; being 1^{in}·9 *less* than the average fall of the preceding 46 years.

ELECTRICITY.—From October 1 to 3. The insulating lamp was not burning.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	miles	in.
Nov. 1	..	29·170	48·0	35·4	41·4	36·7	82·0	35·0	54·5	51·0	4·7	10·9	2·2	— 5·0	SW ; NW	W	0·0	0·0	0·0	125	277	0·15
2	New; Perigee.	29·185	45·0	32·4	38·2	32·7	67·0	31·3	54·0	49·0	5·5	8·5	0·3	— 8·0	NW ; W	NW	5·0	0·0	1·6	165	379	0·21
3	..	29·668	46·3	32·5	39·2	33·4	79·0	24·6	49·5	46·0	5·8	10·3	2·2	— 6·9	NW	NW	3·0	0·0	0·3	110	208	0·00
4	..	29·824	48·8	29·2	40·9	39·5	58·0	23·6	51·5	46·0	1·4	4·4	0·6	— 5·0	SW	SW	1·0	0·0	0·0	180	390	0·05
5	Greatest Declination S.	29·483	55·5	41·7	47·9	44·0	63·0	41·0	52·5	46·0	3·9	8·4	2·5	+ 2·2	SW	SW	12·0	0·0	2·0	170	360	0·57
6	..	29·326	50·2	41·2	45·8	43·3	65·0	36·5	52·5	46·0	2·5	4·8	0·8	+ 0·3	SW	SW	2·0	0·0	0·3	125	235	0·19
7	..	29·311	51·2	34·5	42·3	38·3	88·0	27·0	51·0	45·5	4·0	10·6	0·5	— 2·8	WSW	SW	0·0	0·0	0·0	95	205	0·00
8	..	29·210	47·8	32·9	39·4	36·0	86·0	27·0	49·0	45·0	3·4	9·2	0·3	— 5·4	WSW	WSW	0·0	0·0	0·0	80	179	0·00
9	First Qr.	29·397	46·8	32·5	38·4	35·7	75·0	25·0	48·5	45·0	2·7	8·2	0·0	— 6·1	W	Calm ; SE	0·0	0·0	0·0	120	252	0·00
10	..	29·087	50·8	32·3	42·2	40·2	62·0	26·3	49·0	44·5	2·0	4·4	0·0	— 2·1	SE ; S	SW	10·0	0·0	3·2	230	468	0·53
11	In Equator	29·527	50·7	37·6	43·7	34·9	92·0	30·2	49·0	43·5	8·8	12·4	6·7	— 0·3	WSW	SW	3·5	0·0	1·0	175	338	0·00
12	..	29·607	46·9	37·5	42·5	42·3	64·0	30·0	49·0	42·5	0·2	0·5	0·0	— 1·4	SSW	Var.	0·0	0·0	0·0	15	59	0·15
13	..	29·284	44·3	32·3	39·1	39·1	58·0	30·0	48·0	42·0	0·0	0·7	0·0	— 4·4	ENE	NE	5·0	0·0	1·0	190	477	1·29
14	..	29·168	46·3	34·8	40·7	36·9	75·0	29·5	47·5	41·5	3·8	7·3	1·8	— 2·6	WNW ; W	WNW	9·0	0·0	2·4	155	367	0·54
15	..	29·356	44·8	31·4	37·6	33·1	62·0	30·0	47·0	41·0	4·5	7·8	2·1	— 5·4	W	NW ; N	0·0	0·0	0·0	75	199	0·00
16	Apogee	29·466	38·6	25·5	32·0	26·3	72·0	18·0	46·5	40·0	5·7	11·6	3·2	—10·6	WSW	WSW ; NW	0·0	0·0	0·0	105	257	0·00
17	Full	29·863	35·9	27·0	30·9	26·8	45·0	22·5	46·0	38·5	4·1	6·4	3·3	—11·5	NNE	N	1·0	0·0	0·0	65	168	0·01
18	..	30·247	31·5	23·5	27·1	24·4	35·0	16·5	45·0	36·0	2·7	4·0	1·8	—15·1	W	SW	0·0	0·0	0·0	40	143	0·00
19	Greatest Declination N.	30·352	41·8	23·2	34·1	26·5	73·0	16·5	45·0	35·5	7·6	11·5	5·2	— 8·1	SW	SW	2·0	0·0	0·2	180	374	0·00
20	..	30·058	47·0	36·3	41·8	35·8	83·0	27·0	44·5	35·0	6·0	9·0	3·7	— 0·4	WSW	SW	3·0	0·0	0·8	210	422	0·00
21	..	29·663	52·8	36·5	47·3	43·3	85·0	32·0	43·0	34·0	4·0	6·8	2·9	+ 5·3	SW	SW	9·0	0·0	2·0	280	552	0·01
22	..	29·381	47·4	39·4	42·9	41·1	53·0	42·0	43·0	38·0	1·8	5·9	0·9	+ 1·2	WSW	SW	5·0	0·0	0·5	195	381	1·00
23	..	29·327	43·8	32·5	38·1	33·7	75·0	30·9	43·0	38·0	4·4	6·2	0·0	— 3·3	WSW	W	3·5	0·0	0·3	115	249	0·00
24	..	29·892	37·0	26·0	30·6	24·8	62·0	23·6	42·5	37·5	5·8	9·1	3·8	—10·4	NNE	NNE ; SSW	1·0	0·0	0·0	120	244	0·00
25	Last Qr.	29·697	49·0	27·5	43·2	39·0	69·0	19·7	42·0	38·0	4·2	6·5	3·0	+ 2·4	SW	SW	7·0	0·0	2·0	305	635	0·00
26	In Equator	29·427	57·8	48·8	53·1	50·2	61·0	38·5	43·5	38·0	2·9	4·0	2·0	+12·2	SW	SW ; WNW	11·0	0·0	2·5	140	313	0·06
27	..	29·698	51·0	37·0	42·1	37·5	55·0	33·5	44·5	38·0	4·6	7·0	1·8	+ 1·0	W	WSW	0·0	0·0	0·0	45	157	0·00
28	..	29·831	48·4	32·7	41·1	39·1	74·0	27·0	43·2	39·5	2·0	6·9	0·7	— 0·4	WSW	SW	0·0	0·0	0·0	130	298	0·00
29	..	29·646	56·0	44·0	51·9	51·5	62·0	34·0	44·0	40·0	0·4	2·7	0·0	+10·3	SW	SW	5·0	0·0	1·4	260	516	0·10
30	..	29·681	56·3	43·5	49·7	47·9	66·0	38·0	47·0	40·5	1·8	4·6	1·6	+ 8·1	SW	WSW	5·0	0·0	1·8	250	501	0·20
Means	..	29·561	47·3	34·1	40·8	37·1	68·2	28·9	47·2	41·4	3·7	7·0	1·8	— 2·4	...	...	..	..	..	Sum 4450	Sum 9603	Sum 5·06

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·860 on the 4th ; the second maximum ,, was 29in·487 on the 9th ; the third maximum ,, was 29in·637 on the 12th ; the absolute maximum ,, was 30in·426 on the 19th ; the fifth maximum ,, was 29in·964 on the 24th ; the sixth maximum ,, was 29in·848 on the 28th ; the seventh minimum ,, was 29in·641 on the 29th.

The first minimum in the month was 29in·115 on the 2nd. The second minimum ,, was 29in·208 on the 8th. The third minimum ,, was 29in·021 on the 10th. The absolute minimum ,, was 28in·918 on the 13th. The fifth minimum ,, was 29in·208 on the 22nd. The sixth minimum ,, was 29in·355 on the 26th.

The range in the month was 1in·508.

The mean for the month was 29in·561, being 0in·195 *lower* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 57°·8 on the 26th; the lowest was 23°·2 on the 19th; and the range in the month was 34°·6.

The mean ,, of all the highest daily readings was 47°·3, being 2°·0 *lower* than the average of the preceding 20 years.

The mean ,, of all the lowest daily readings was 34°·1, being 3°·6 *lower* than the average of the preceding 20 years.

The mean daily range was 13°·2, being 1°·6 *greater* than the average of the preceding 20 years.

The mean for the month was 40°·8, being 2°·6 *lower* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Nov. 1	o	o : m	10, r	7, li.-cl : o : 10, l, r
2			10, sn	10 : o
3			5, li.-cl	7, ci.-cu, ci.-s : o, h
4			10, th.-r	10, th.-r
5			10, ci.-s, sc	10, r : o
6			10, h.-r : 10, li.-cl	10, oc.-r : l : 10
7	o	s	o, h.-f : 7, li.-cl	7, li.-cl : o : l
8	s	s	10, f : o, h	7, li.-cl, h : o, f, h.-f
9	s	s	10, f	1, ci : 1, h.-f
10	s N	s N : m	10, n, s, h.-sqs.-r	10, n, s, ci.-s, t, r : o : l
11			5, li.-cl	5, li.-cl : o
12			10, r	10, r : f
13			10, r	10, r
14			10, r : 7, li.-cl	7, li.-cl : 10, r
15			10, li.-cl	10 : 1, ci.-s, h, h.-f, lu.-ha
16			o, h, h.-f	7, li.-cl : 10, h
17			10, ci.-s, sn	10, ci.-s : o, h.-f
18			10, h, h.-f	10, h, h.-f : h, h.-f
19			2, ci.-s, h.-f	2, li.-cl
20			7, ci.-s : o	o
21			10	10 : oc.-r
22			10, h.-r	10, r
23			o	10 : 10, th.-f
24			o, h	o, h
25			10, li.-cl	10
26			10, r	10, oc.-r
27			10, li.-cl	10, ci.-s : o
28			10, li.-cl, h	7, ci.-cu, ci.-s
29			10, r	10
30			10, h.-r	10, oc.-r : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·3 on the 26th; and the lowest was 21°·3 on the 24th.

The mean ,, was 37°·1, being 3°·0 *lower* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot221$ being $0^{in}\cdot034$ *less* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{gr}\cdot6$, being $0^{gr}\cdot3$ *less* than the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 87 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 20 years

Weight of a Cubic Foot of Air.—The mean for the month was 547 grains, being the same as the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·9.

WIND.

The proportions were of N. 4, S. 9, W. 16, and E. 1. The greatest pressure in the month was $12^{lbs}\cdot0$ on the square foot on the 5th.

RAIN.

Fell on 15 days in the month, amounting to $5^{in}\cdot1$, as measured in the simple cylinder gauge partly sunk below the ground; being $2^{in}\cdot7$ *greater* than the average fall of the preceding 46 years.

ELECTRICITY.—The insulating lamp was not burning from November 2 to 6; and the Electrometer was not in action from November 11 to December 31.

MONTH and DAY, 1861.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheatstone's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Dec. 1	Perigee New; Greatest Dec. S.	29·911	49·3	35·0	43·4	37·2	76·0	31·0	47·5	42·0	6·2	10·9	4·4	+ 1·7	WSW ; W	NW ; NNE	6·0	0·0	1·9	65	162	0·00
2	..	30·279	45·4	28·0	36·5	34·2	68·0	24·0	47·0	42·0	2·3	6·2	0·0	— 5·3	Calm	SE	0·0	0·0	0·0	65	110	0·00
3	..	30·129	45·8	30·7	37·5	32·2	68·0	23·5	47·0	42·0	5·3	11·4	2·6	— 4·2	SSE	SE	0·0	0·0	0·0	40	85	0·00
4	..	29·937	45·2	27·3	37·0	33·0	79·0	21·0	46·0	41·0	4·0	9·2	1·9	— 4·5	SE	SSE	0·0	0·0	0·0	90	173	0·00
5	..	29·623	44·0	34·5	39·4	35·3	53·0	27·5	46·0	40·0	4·1	9·6	0·0	— 2·0	SW ; NW	WSW	2·0	0·0	0·2	110	224	0·32
6	..	29·401	47·9	34·2	41·8	41·5	50·0	27·0	46·0	40·0	0·3	2·9	0·0	+ 0·7	SW	S ; WSW	2·0	0·0	0·1	180	346	0·27
7	..	29·220	53·8	43·0	48·3	43·7	75·0	37·8	44·0	40·0	4·6	8·0	2·9	+ 7·6	WSW	SW	7·0	0·0	1·7	150	295	0·15
8	..	29·503	52·5	42·9	47·6	42·0	80·0	37·8	43·0	39·5	5·6	10·0	3·1	+ 7·0	WSW	SW	4·0	0·0	0·4	170	348	0·25
9	First Quarter; In Equator.	29·748	54·0	42·9	48·7	46·4	82·2	35·0	43·5	38·0	2·3	6·8	0·0	+ 8·2	SW	SSW	3·0	0·0	0·3	110	185	0·01
10	..	29·672	53·2	43·7	49·1	47·0	82·0	38·0	44·0	41·0	2·1	5·0	1·3	+ 8·7	SE ; SW	SW	3·5	0·0	0·3	115	220	0·00
11	..	29·939	51·8	39·8	45·6	42·5	81·0	33·8	46·0	43·0	3·1	6·9	0·0	+ 5·4	SW	SW ; S	2·0	0·0	0·0	160	311	0·04
12	..	29·720	52·0	48·0	50·3	46·8	59·0	38·0	46·0	42·0	3·5	4·4	2·1	+10·3	SW	SSW	5·0	0·5	1·8	230	456	0·00
13	Apogee	29·329	53·2	48·0	50·6	46·8	62·0	43·4	..	..	3·8	5·8	2·3	+11·0	S	SW	9·0	1·0	2·5	250	479	0·07
14	..	29·887	49·3	39·5	44·7	40·3	82·0	34·0	..	..	4·4	8·8	3·0	+ 5·0	WSW	W	2·5	0·0	0·5	205	420	0·02
15	..	30·074	49·8	43·2	46·1	41·2	65·0	39·0	..	..	4·9	6·7	1·5	+ 6·1	W	WNW	3·0	0·0	0·5	120	209	0·00
16	Greatest Declination N.	30·083	51·0	43·3	47·8	46·4	52·0	40·0	..	..	1·4	3·4	0·6	+ 7·5	W	NW	2·0	0·0	0·0	85	205	0·09
17	Full	30·036	47·0	39·3	43·3	39·6	50·0	34·0	..	..	3·7	4·6	3·1	+ 3·2	NW	NW ; SW	1·5	0·0	0·0	135	267	0·00
18	..	29·822	47·3	40·5	44·2	40·1	52·0	35·0	..	..	4·1	6·9	2·1	+ 4·3	W	N	3·0	0·0	0·8	180	375	0·00
19	..	30·119	45·0	34·5	39·3	35·4	69·0	..	..	..	3·9	6·2	1·2	— 0·2	NNE	NE	3·0	0·0	0·6	85	210	0·00
20	..	30·278	42·0	35·6	39·2	34·0	55·0	26·0	..	..	5·2	7·4	3·9	+ 0·2	NE	NE	0·0	0·0	0·0	80	180	0·00
21	..	30·196	40·8	36·5	38·6	35·5	51·0	32·0	..	..	3·1	3·3	2·8	— 0·2	NE	NE	0·0	0·0	0·0	70	174	0·00
22	..	30·147	40·2	37·5	39·2	35·2	48·0	36·0	..	..	4·0	5·8	3·7	+ 1·3	ENE	NE	0·0	0·0	0·0	95	226	0·00
23	In Equator	30·202	45·0	37·5	41·7	37·9	52·0	34·0	..	..	3·8	4·8	2·8	+ 4·3	NE	ENE	2·0	0·0	0·0	95	225	0·00
24	Last Qr.	30·152	43·5	33·0	38·4	32·8	75·0	30·0	..	..	5·6	7·3	2·9	+ 1·4	E	ESE	3·0	0·0	0·2	115	225	0·00
25	..	30·057	42·2	32·1	36·3	29·8	69·8	27·2	..	..	6·5	9·9	4·8	— 0·2	ESE	ESE	0·0	0·0	0·0	50	110	0·00
26	..	30·127	40·0	24·5	31·8	30·1	58·0	22·0	..	..	1·7	6·3	0·0	— 4·6	Calm	E	0·0	0·0	0·0	10	41	0·00
27	..	30·400	39·1	23·5	32·2	31·2	40·4	19·6	..	..	1·0	4·3	0·0	— 4·3	Calm	ESE	2·0	0·0	0·1	75	178	0·00
28	..	30·369	40·0	33·5	36·7	32·3	49·0	30·2	..	..	4·4	7·0	3·0	— 0·3	E	E	0·0	0·0	0·0	70	164	0·00
29	Perigee	30·291	35·0	25·0	29·6	25·4	44·0	30·0	..	..	4·2	4·6	4·1	— 7·7	E	NE	0·0	0·0	0·0	5	40	0·00
30	Greatest Declination S.	30·283	36·1	23·5	29·9	28·9	36·1	23·0	..	..	1·0	4·6	0·0	— 7·5	NE	ENE	0·0	0·0	0·0	35	96	0·00
31	New	30·256	40·0	34·4	36·6	32·4	44·8	32·5	..	..	4·2	8·4	3·3	— 0·4	ENE	NE	0·0	0·0	0·0	40	94	0·03
Means	..	29·974	45·9	36·0	41·0	37·3	61·6	31·4	..	..	3·7	6·7	2·0	+ 1·7	...	...	..	..	..	Sum 3285	Sum 6833	Sum 1·25

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·318 on the 2nd; the absolute minimum in the month was 29in·101 on the 7th.
The second maximum .. was 29in·792 on the 9th; the second minimum .. was 29in·643 on the 10th.
The third maximum .. was 29in·956 on the 11th; the third minimum .. was 29in·283 on the 13th.
The fourth maximum .. was 30in·116 on the 15th; the fourth minimum .. was 29in·807 on the 18th.
The fifth maximum .. was 30in·295 on the 20th; the fifth minimum .. was 30in·043 on the 25th.
The absolute maximum .. was 30in·416 on the 27th; the sixth minimum .. was 30in·242 on the 31st.
The range in the month was 1in·315.
The mean for the month was 29in·974, being 0in·169 *higher* than the average of the preceding 20 years.

TEMPERATURE OF THE AIR.

The highest in the month was 54°·0 on the 9th; the lowest was 23°·5 on the 27th and 30th.
The range .. was 30°·5.
The mean .. of all the highest daily readings was 45°·9, being 0°·9 *higher* than the average of the preceding 20 years.
The mean .. of all the lowest daily readings was 36°·0, being 0°·5 *higher* than the average of the preceding 20 years.
The mean daily range was 9°·9, being 0°·4 *greater* than the average of the preceding 20 years.
The mean for the month was 41°·0, being 0°·9 *higher* than the average of the preceding 20 years.

MONTH and DAY, 1861.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Dec. 1			8, ci.-cu, ci.-s, sc	7, li.-cl
2			7, ci.-cu, ci.-s, f, h.-f	7, li.-cl : 0
3			3, ci, h.-f	0 : h.-f
4			0, f, h.-f : 0	0 : a
5			10, r : 7, li.-cl, h	0, h
6			10	10, r
7			10, r : 0	7, li.-cl
8			10 : 0	0 : 7, ci
9			10, s, ci.-s : h.-sh.-r	2, ci
10			10 : 2, li.-cl	10 : oc.-r
11			10, h.-r : 0	0 : 5, ci.-cu, cu.-s, lu.-cor
12			10, r	10
13			10, r	10, fr.-r : cu.-s, ci.-s
14			10, sl.-r : 0	0 : 9, ci.-s
15			10	10, li.-cl
16			10, h.-r	10, h.-r : 10, f
17			10, f	10, th.-f : 10, ci.-s, sc, lu.-cor
18			10	10 : 10, fr.-r
19			0 : 5, li.-cl	7, ci.-s, sc : 3, ci.-cu, ci.-s : 1, a
20			10, li.-cl	10
21			10	10
22			10	10
23			10	10
24			0	0
25			0, h.-f	0
26			0, f, h.-f	0 : 0, f
27			10, th.-f, h.-f	10
28			10	10, li.-cl
29			10	10 : 10, th.-f
30			10, h.-f	9, ci.-cu, ci.-s : 10, f
31			10, r : 10, ci.-cu, ci.-s	10, cu.-s, ci.-s : 10, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 48°·4 on the 10th and 16th; and the lowest was 23°·9 on the 29th.
The mean ,, was 37°·3, being 0°·4 *higher* than the average of the preceding 20 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}·223$, being $0^{in}·002$ *greater* than the average of the preceding 20 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{gr}·6$, being the same as the average of the preceding 20 years.

Degree of Humidity.—The mean for the month was 87 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 20 years.

Weight of a Cubic Foot of Air.—The mean for the month was 555 grains, being 3 grains *greater* than the average of the preceding 20 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·5.

WIND.

The proportions were of N. 5, S. 7, W. 9, and E. 10. The greatest pressure in the month was $9^{lbs}·0$ on the square foot on the 13th.

RAIN.

Fell on 10 days in the month, amounting to $1^{in}·3$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{in}·7$ *less* than the average fall of the preceding 46 years.

ELECTRICITY.—The Electrometer was not in action throughout the month.

MAXIMA AND MINIMA READINGS OF THE BAROMETER.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° Fahrenheit, extracted from the photographic records. The readings are accurate ; but the times are liable to great uncertainty, as the barometer frequently remains at its highest or lowest point through several hours. The time is the middle of the stationary period. Where the symbol : follows the time, it denotes that the quicksilver has been sensibly stationary through a period of more than one hour.

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1861.		Reading.	Approximate Mean Solar Time, 1861.		Reading.	Approximate Mean Solar Time, 1861.		Reading.	Approximate Mean Solar Time, 1861.		Reading.
	d h m	in.		d h m	in.		d h m			d h m	in.
January	3. 0. 0	30·166	January	0. 21. 0	29·000	May	20. 21. 0	30·262	May	16. 20. 8	29·920
	10. 12. 30:	30·230		4. 20. 0	29·875		27. 9. 0	29·972		25. 9. 0:	29·612
	20. 10. 0:	30·357		13. 15. 15:	29·520	June	3. 21. 0:	29·906	June	1. 0. 0:	29·676
	26. 2. 35	30·234		25. 15. 10	29·755		12. 18. 20:	30·075		9. 14. 0:	29·538
February	2. 0. 0	30·544		29. 19. 0	29·962		17. 18. 40	29·945		14. 22. 45	29·833
	7. 9. 5	29·468	February	6. 4. 40:	29·213		24. 9. 0	29·724		23. 7. 30:	29·590
	10. 7. 25	30·152		8. 11. 0	29·368		27. 20. 10:	29·700		26. 6. 0:	29·480
	13. 21. 0:	29·962		12. 20. 45:	29·457	July	0. 19. 7	30·037		28. 21. 45:	29·575
	16. 11. 0:	29·675		15. 19. 45	29·460		9. 21. 0:	29·813	July	5. 0. 0:	29·170
	20. 22. 35	29·375		20. 13. 43	29·150		16. 21. 0	29·788		13. 9. 0	29·338
	21. 23. 30	29·560		21. 6. 33	29·105		22. 0. 0	29·651		19. 18. 0:	29·535
	25. 0. 0:	30·073		23. 0. 46	29·390		23. 20. 30	29·705		22. 18. 50	29·410
March	2. 0. 0	29·843	March	1. 3. 40:	29·430		28. 16. 30:	29·920		25. 16. 0:	29·336
	4. 19. 7	30·135		2. 20. 5	29·423	August	0. 21. 0:	29·553		29. 19. 0:	29·660
	7. 7. 15:	30·039		6. 5. 40	29·496		4. 0. 0:	29·897	August	2. 9. 0:	29·544
	9. 0. 0:	30·283		8. 0. 0	29·861		6. 9. 0	29·953		5. 3. 0:	29·740
	13. 21. 45:	30·148		11. 6. 35	29·135		10. 0. 37	29·965		8. 2. 35:	29·530
	19. 23. 0:	29·529		18. 22. 0:	28·818		13. 17. 0:	29·945		12. 3. 0	29·595
	22. 23. 0:	29·743		20. 8. 30	29·148		17. 10. 30:	29·969		14. 21. 0:	29·564
	24. 21. 15	29·810		23. 21. 30:	29·627		21. 22. 20:	30·139		18. 8. 0	29·759
	29. 10. 0:	29·615		27. 18. 0:	29·262		26. 21. 30:	30·137		23. 2. 30:	29·921
April	1. 0. 0:	29·628		30. 22. 0:	29·466		30. 21. 0	30·165		28. 18. 0:	29·668
	9. 9. 0	30·412	April	1. 21. 30:	29·553	September	4. 23. 0	29·913	September	3. 3. 30:	29·612
	15. 23. 15:	30·247		13. 19. 0:	30·115		7. 21. 30:	29·929		6. 7. 30	29·600
	26. 11. 0:	30·037		22. 18. 0:	29·684		12. 11. 0:	30·038		9. 22. 0:	29·780
	29. 23. 30:	30·160		28. 1. 30:	29·904		17. 21. 0	30·079		14. 5. 0:	29·533
May	5. 8. 40	30·076	May	3. 5. 8	29·810		26. 23. 0:	29·841		25. 5. 30:	29·140
	14. 9. 35	30·310		11. 3. 0	29·434		29. 9. 15:	29·841		28. 17. 0:	29·660

MAXIMA AND MINIMA READINGS OF THE BAROMETER—*concluded.*

MAXIMA.		MINIMA.		MAXIMA.		MINIMA.	
Approximate Mean Solar Time, 1861.	Reading.	Approximate Mean Solar Time, 1861.	Reading.	Approximate Mean Solar Time, 1861.	Reading.	Approximate Mean Solar Time, 1861.	Reading.
d h m	in.	d h m	in.	d h m	in.	d h m	in.
October 2. 22. 10:	30·020	October 1. 0. 0:	29·568	November 18. 23. 15	30·428	November 13. 9. 30	28·790
5. 22. 45	30·046	5. 2. 0:	29·868	24. 8. 30:	29·964	22. 10. 15:	29·208
9. 9. 15	29·870	8. 3. 0	29·664	28. 6. 45	29·860	26. 1. 0:	29·355
12. 12. 30:	29·903	11. 2. 20	29·275	December 1. 22. 15	29·318	28. 21. 0:	29·641
16. 21. 0:	30·171	13. 3. 0:	29·765	9. 9. 0:	29·792	December 6. 21. 0	29·101
25. 21. 0:	30·030	21. 4. 30:	29·586	11. 4. 0:	29·956	10. 3. 50:	29·643
November 3. 20. 45	29·865	November 1. 21. 0	29·115	15. 9. 0:	30·116	13. 4. 40:	29·283
9. 9. 45:	29·487	8. 1. 35:	29·195	20. 0. 30	30·295	17. 21. 0:	29·807
11. 21. 0:	29·637	10. 0. 0	29·005	26. 23. 0:	30·416	25. 6. 30:	30·043
						31. 9. 0:	30·242

MONTHLY MEANS of RESULTS for METEOROLOGICAL ELEMENTS at the ROYAL OBSERVATORY, GREENWICH, in the Year 1861.

1861, MONTH.	Mean Reading of the Barometer.	TEMPERATURE OF THE AIR. Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Mean Temperature.	Mean Temperature of Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required to saturate a Cubic Foot of Air.
	in.	°	°	°	°	°	°	°	°	in.	gr.	gr.
January ..	30·011	55·0	16·0	39·0	39·6	28·7	10·9	33·8	30·0	0·167	1·9	0·3
February..	29·686	56·0	24·4	31·6	48·2	36·9	11·3	42·1	39·4	0·241	2·8	0·3
March	29·614	61·8	29·1	32·7	52·7	37·1	15·6	43·8	41·2	0·259	2·9	0·3
April	29·999	63·5	26·8	36·7	55·0	36·0	19·0	44·3	40·2	0·249	2·9	0·5
May	29·924	80·2	33·4	46·8	63·5	43·0	20·5	51·9	43·6	0·284	3·2	1·2
June	29·782	81·8	42·9	38·9	70·8	51·3	19·5	59·1	53·1	0·404	4·6	1·0
July.....	29·606	76·3	48·4	27·9	72·3	53·4	18·9	60·9	53·7	0·413	4·6	1·3
August ...	29·863	89·3	46·2	43·1	75·6	53·8	21·8	63·2	55·2	0·436	4·9	1·6
September.	29·717	81·1	37·7	43·4	68·3	48·2	20·1	57·1	50·6	0·369	4·1	1·2
October...	29·842	75·6	39·6	36·0	64·1	47·7	16·4	54·9	51·3	0·378	4·2	0·6
November.	29·561	57·8	23·2	34·6	47·3	34·1	13·2	40·8	37·1	0·221	2·6	0·4
December .	29·974	54·0	23·5	30·5	45·9	36·0	9·9	41·0	37·3	0·223	2·6	0·4
Means	29·798	69·4	32·6	36·8	58·6	42·2	16·4	49·4	44·4	0·304	3·4	0·8

1861, MONTH.	Mean Degree of Humidity. (Sat. = 100.)	Mean Weight of a Cubic Foot of Air.	Mean Amount of Cloud. 0–10	RAIN. Number of Rainy Days.	Amount collected on the Ground, read daily.	Amount collected on the Ground, read Monthly.	WIND. From Osler's Anemometer. Number of Days for Mean Direction of the Wind referred to different Points of Azimuth. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of Calm Days and Days on which the Pressure of the Wind was less than ¼ lb. on the Sq. Foot.	Mean Daily Pressure in lbs. on Square Foot.	From Whewell's Anemometer. Mean Daily Horizontal Movement of Wind in Miles.	From Robinson's Anemometer.
		gr.			in.	in.												
January...	85	564	7·0	7	..	0·6	0	3	1	1	2	11	1	1	11	0·44	54	177
February..	91	548	7·4	11	..	1·8	1	4	1	2	3	11	2	2	2	0·96	116	248
March	90	545	6·5	21	..	2·2	2	0	1	0	0	10	11	5	2	1·27	175	346
April.....	85	551	7·1	6	0·8	0·8	4	6	9	0	0	1	2	3	5	0·08	83	189
May	74	542	7·6	8	1·8	1·6	8	7	3	1	1	3	3	2	3	0·19	88	201
June.....	81	531	7·4	15	1·9	1·8	4	6	5	2	1	8	3	1	0	0·08	86	196
July.....	78	526	7·4	20	2·2	2·1	0	0	1	1	2	18	7	2	0	0·30	140	277
August ...	76	528	5·9	9	0·6	0·6	0	0	0	0	2	15	11	3	0	0·26	120	270
September.	79	532	6·3	15	1·5	1·5	3	1	0	1	3	13	8	1	0	0·27	108	255
October...	87	536	6·5	10	0·9	0·9	1	7	4	6	4	8	1	0	0	0·11	82	180
November.	87	547	6·9	15	5·1	5·2	2	2	0	0	1	15	7	3	0	0·78	148	320
December .	87	555	6·5	10	1·2	1·3	1	7	4	3	3	6	3	2	2	0·38	106	220
Means	83	542	6·9	Sum 147	..	Sum 20·4	Sum 26	Sum 43	Sum 29	Sum 17	Sum 22	Sum 119	Sum 59	Sum 25	Sum 25	..	..	..

Whewell's Anemometer was not at work during 3 days of January and 5 days of February. The mean horizontal movement for these months has been formed from the remaining days.

READINGS OF THERMOMETERS SUNK IN THE GROUND.

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day, except Sundays, Good Friday, and Christmas Day.

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·96	50·30	49·39	48·45	47·96	47·84	48·11	48·86	*S*	50·72	51·37	*S*
2	50·92	50·25	49·35	48·44	47·98	*S*	48·13	48·90	49·86	50·75	51·36	51·68
3	50·96	*S*	*S*	48·42	47·96	47·87	48·15	48·92	49·90	50·76	*S*	51·69
4	50·90	50·17	49·26	48·40	47·93	47·84	48·16	*S*	49·91	50·80	51·40	51·67
5	50·86	50·17	49·22	48·38	*S*	47·86	48·18	49·02	49·98	50·80	51·45	51·67
6	*S*	50·11	49·22	48.35	47·95	47·86	48·20	49·02	49·99	*S*	51·46	51·67
7	50·82	50·11	49·12	*S*	47·90	47·85	*S*	49·05	50·02	50·91	51·46	51·70
8	50·80	50·05	49·16	48·32	47·90	47·86	48·25	49·04	*S*	50·95	51·48	*S*
9	50·79	50·03	49·11	48·30	47·88	*S*	48·27	49·10	50·09	50·96	51·48	51·70
10	50·75	*S*	*S*	48·31	47·90	47·87	48·28	49·15	50·10	50·96	*S*	51·70
11	50·76	49·94	49·03	48·28	47·90	47·88	48·30	*S*	50·12	51·02	51·53	51·70
12	50·73	49·90	48·88	48·26	*S*	47·87	48·33	49·20	50·14	51·02	51·57	51·70
13	*S*	49·90	48·96	48·22	47·88	47·90	48·35	49·23	50·26	*S*	51·52	51·70
14	50·68	49·86	48·95	*S*	47·88	47·90	*S*	49·25	50·23	51·10	51·55	51·66
15	50·64	49·83	48·92	48·19	47·90	47·92	48·40	49·30	*S*	51·10	51·56	*S*
16	50·65	49·80	48·88	48·16	47·90	*S*	48·42	49·31	50·27	51·10	51·55	51·65
17	50·65	*S*	*S*	48·17	47·85	47·93	48·45	49·35	50·30	51·10	*S*	51·65
18	50·62	49·75	48·81	48·10	47·86	47·96	48·46	*S*	50·35	51·13	51·55	51·63
19	50·61	49·72	48·79	48·10	*S*	47·96	48·50	49·42	50·40	51·15	51·62	51·61
20	*S*	49·68	48·76	48·10	47·88	47·96	48·48	49·45	50·40	*S*	51·62	51·60
21	50·57	49·65	48·72	*S*	47·88	47·98	*S*	49·47	50·45	51·20	51·65	51·58
22	50·56	49·62	48·71	48·05	47·86	47·97	48·58	49·52	*S*	51·23	51·63	*S*
23	50·51	49·58	48·71	48·03	47·90	*S*	48·60	49·54	50·46	51·23	51·62	51·56
24	50·50	*S*	*S*	48·07	47·87	48·03	48·62	49·55	50·51	51·28	*S*	51·55
25	50·50	49·50	48·62	48·06	47·86	48·02	48·66	*S*	50·51	51·30	51·65	Christmas Day
26	50·47	49·48	48·56	48·05	*S*	48·05	48·72	49·63	50·55	51·30	51·70	51·50
27	*S*	49·45	48·60	48·01	47·86	48·06	48·71	49·68	50·60	*S*	51·65	51·47
28	50·41	49·40	48·55	*S*	47·86	48·07	*S*	49·75	50·61	51·32	51·63	51·50
29	50·38		Good Friday.	48·02	47·85	48·05	48·78	49·72	*S*	51·35	51·70	*S*
30	50·35		48·46	48·00	47·87	*S*	48·80	49·77	50·68	51·37	51·72	51·40
31	50·34		*S*		47·86		48·83	49·80		51·38		51·41
Means.	50·66	49·84	48·91	48·20	47·89	47·93	48·43	49·33	50·27	51·08	51·56	51·61

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times.

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·90	45·74	45·18	45·32	46·21	47·46	50·50	53·06	*S*	55·41	54·73	*S*
2	48·81	45·62	45·17	45·36	46·23	*S*	50·61	53·15	55·07	55·33	54·68	52·03
3	48·71	*S*	*S*	45·33	46·30	47·71	50·68	53·15	55·06	55·34	*S*	51·95
4	48·50	45·55	45·13	45·41	46·32	47·78	50·85	*S*	55·07	55·32	54·62	51·83
5	48·37	45·60	45·18	45·39	*S*	47·90	50·88	53·37	55·18	55·26	54·62	51·72
6	*S*	45·43	45·18	45·40	46·38	48·02	51·02	53·38	55·18	*S*	54·58	51·62
7	48·13	45·52	45·10	*S*	46·38	48·10	*S*	53·47	55·20	55·26	54·53	51·58
8	48·06	45·38	45·18	45·50	46·41	48·20	51·12	53·44	*S*	55·28	54·50	*S*
9	47·95	45·39	45·22	45·51	46·36	*S*	51·32	53·56	55·25	55·20	54·40	51·36
10	47·88	*S*	*S*	45·52	46·48	48·40	51·40	53·68	55·29	55·18	*S*	51·30
11	47·82	45·25	45·22	45·57	46·50	48·52	51·48	*S*	55·31	55·20	54·30	51·20
12	47·66	45·26	45·22	45·58	*S*	48·61	51·52	53·80	55·30	55·10	54·21	51·12

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12 French feet—*concluded.*

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	*S*	45·30	45·22	45·58	46·56	48·77	51·62	53·82	55·30	*S*	54·10	51·02
14	47·43	45·32	45·23	*S*	46·60	48·82	*S*	53·92	55·40	55·18	54·07	50·92
15	47·33	45·32	45·26	45·63	46·65	48·88	51·78	53·93	*S*	55·12	53·95	*S*
16	47·32	45·32	45·30	45·58	46·68	*S*	51·88	53·96	55·40	55·08	53·80	50·72
17	47·22	*S*	*S*	45·72	46·58	49·02	52·01	54·08	55·41	55·06	*S*	50·68
18	47·11	45·30	45·30	45·60	46·70	49·11	52·02	*S*	55·50	55·05	53·60	50·61
19	47·02	45·30	45·30	45·61	*S*	49·20	52·10	54·25	55·50	55·05	53·51	50·52
20	*S*	45·72	45·30	45·77	46·79	49·22	52·15	54·26	55·50	*S*	53·50	50·48
21	46·82	45·23	45·33	*S*	46·83	49·32	*S*	54·26	55·48	55·05	53·40	50·40
22	46·71	45·23	45·32	45·73	46·87	49·40	52·32	54·41	*S*	55·08	53·25	*S*
23	46·62	45·20	45·36	45·78	46·92	*S*	52·42	54·50	55·43	55·02	53·15	50·30
24	46·47	*S*	*S*	45·92	46·96	49·82	52·48	54·56	55·45	55·07	*S*	50·26
25	46·43	45·21	45·33	46·00	47·02	49·73	52·57	*S*	55·39	55·03	52·92	ChristmasDay.
26	46·32	45·21	45·20	46·02	*S*	49·88	52·60	54·68	55·40	55·00	52·83	50·12
27	*S*	45·18	45·32	46·02	47·16	50·02	52·72	54·80	55·42	*S*	52·63	50·03
28	46·18	45·19	45·32	*S*	47·22	50·12	*S*	54·88	55·38	54·90	52·52	50·02
29	46·03		GoodFriday.	46·12	47·22	50·20	52·85	54·88	*S*	54·90	52·48	*S*
30	45·94		45·21	46·19	47·36	*S*	52·94	54·93	55·44	54·88	52·33	49·85
31	45·88		*S*		47·45		53·00	54·98		54·81		49·81
Means.	47·32	45·37	45·24	45·66	46·71	48·89	51·81	54·04	55·33	55·12	53·74	50·86

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times.

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	44·20		44·22	45·30	47·57	51·87	56·77	58·58	*S*	57·70	55·83	*S*
2	44·19		44·20	45·53	47·51	*S*	56·77	58·67	60·03	57·55	55·60	48·96
3	44·12		*S*	45·67	47·59	52·28	56·82	58·72	60·02	57·54	*S*	49·02
4	43·96		44·32	45·60	47·57	52·54	56·88	*S*	60·02	57·56	55·21	49·02
5	43·86		44·32	45·78	*S*	52·72	57·02	58·98	60·12	57·54	55·00	48·96
6	*S*		44·39	45·86	47·80	52·80	57·09	59·02	60·10	*S*	54·65	48·70
7	43·50		44·40	*S*	47·85	52·89	*S*	59·04	60·08	57·60	54·30	48·48
8	43·40		44·49	46·03	47·90	52·91	57·20	59·05	*S*	57·60	54·12	*S*
9	43·30		44·48	46·18	47·82	*S*	57·20	59·21	60·10	57·60	53·83	47·90
10			*S*	46·20	48·03	52·98	57·20	59·37	60·08	57·72	*S*	48·02
11			44·78	46·19	48·03	53·03	57·35	*S*	60·02	57·75	53·26	48·02
12			44·84	46·23	*S*	53·12	57·48	59·64	59·90	57·62	53·05	48·03
13			44·88	46·20	48·08	53·06	57·53	59·65	59·82	*S*	52·83	48·10
14			44·92	*S*	48·15	53·20	*S*	59·87	59·78	57·78	52·30	48·12
15			44·97	46·40	48·30	53·29	57·71	60·02	*S*	57·60	52·03	*S*
16			44·91	46·30	48·27	*S*	57·82	60·08	59·51	57·52	51·72	48·30
17			*S*	46·60	48·31	53·80	58·02	60·28	59·30	57·50	*S*	48·30
18			44·92	46·58	48·60	54·13	58·03	*S*	59·30	57·47	51·30	48·30
19			44·92	46·63	*S*	54·50	58·04	60·47	59·18	57·38	51·12	48·31
20			44·81	47·00	49·12	54·85	58·13	60·30	59·02	*S*	50·90	48·39
21			44·76	*S*	49·27	55·17	*S*	60·30	58·82	57·14	50·58	48·41
22			44·73	47·17	49·50	55·46	58·23	60·33	*S*	57·04	50·12	*S*
23			44·73	47·25	49·80	*S*	58·21	60·32	58·60	56·82	49·54	48·21
24			*S*	47·50	49·98	56·03	58·30	60·29	58·51	56·78	*S*	48·10
25			44·76	47·51	50·22	56·18	58·33	*S*	58·32	56·60	49·30	ChristmasDay
26		44·03	44·60	47·56	*S*	56·25	58·37	60·10	58·28	56·50	49·20	47·96

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6 French feet—*concluded.*

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
27		44·10	44·80	47·50	50·83	56·41	58·48	60·19	58·20	*S*	49·11	47·78
28		44·17	44·97	*S*	51·03	56·55	*S*	60·10	58·00	56·30	49·03	47·56
29			Good Friday.	47·60	51·26	56·59	58·60	60·05	*S*	56·23	49·02	*S*
30			45·02	47·68	51·60	*S*	58·48	59·96	57·80	56·21	49·02	47·06
31			*S*		51·70		58·62	60·01		56·02		46·90
Means.	..	..	44·69	46·54	48·95	54·10	57·73	59·75	59·32	57·21	52·00	48·20

At temperatures below 43°·50 the fluid of this thermometer descends below the scale; the readings from January 10 to February 25 were all less than 43°·50.

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at the same times.

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1		39·63	42·63	45·00	46·60	56·10	60·53	62·05	*S*	57·46	53·70	*S*
2		39·96	42·90	44·98	46·98	*S*	60·52	62·33	62·70	57·80	53·21	46·02
3		*S*	*S*	44·98	47·35	56·26	60·86	62·41	62·83	58·10	*S*	45·60
4		39·93	43·08	45·18	47·60	55·92	60·90	*S*	62·93	58·12	51·48	44·98
5		40·10	43·03	45·40	*S*	55·73	60·66	62·32	62·82	58·18	50·70	44·21
6		40·30	42·78	45·51	47·58	55·56	60·61	62·60	62·72	*S*	50·51	43·70
7		40·87	42·95	*S*	47·80	55·35	*S*	63·02	62·80	58·32	50·30	43·40
8		40·93	43·16	45·44	47·82	55·12	60·83	63·18	*S*	58·45	49·98	*S*
9		41·28	43·47	45·30	47·60	*S*	60·85	63·37	62·02	58·83	49·42	44·25
10		*S*	*S*	45·17	47·65	54·83	61·02	63·45	61·82	58·70	*S*	44·60
11		41·12	43·73	45·16	47·72	55·00	61·21	*S*	61·71	58·68	48·48	45·00
12		40·75	43·79	45·46	*S*	55·20	61·47	64·10	61·40	58·60	48·21	45·21
13		40·28	43·49	45·82	48·03	55·73	61·52	64·60	61·08	*S*	47·98	45·50
14		40·03	43·25	*S*	48·30	56·51	*S*	65·10	60·91	58·10	47·21	45·83
15		39·77	43·08	46·33	48·43	57·48	61·82	65·13	*S*	58·20	47·10	*S*
16		40·08	43·20	46·40	49·23	*S*	61·93	65·02	59·92	58·01	46·83	45·80
17		*S*	*S*	46·63	50·06	59·37	61·95	64·77	59·52	57·81	*S*	45·88
18		41·18	42·88	47·09	50·77	60·05	61·93	*S*	59·30	57·30	45·63	45·93
19		41·45	42·57	47·46	*S*	60·53	61·92	64·10	59·20	56·81	45·00	45·80
20		41·86	42·50	47·86	51·15	61·08	61·80	64·06	59·06	*S*	44·42	45·46
21		41·94	42·58	*S*	51·63	61·42	*S*	63·83	59·06	56·00	44·12	45·02
22		42·32	42·57	47·40	52·28	61·47	61·82	63·32	*S*	55·88	44·25	*S*
23		42·43	42·42	47·23	53·20	*S*	61·93	62·93	58·38	55·80	44·48	44·50
24		*S*	*S*	47·32	53·60	61·45	61·88	62·75	58·34	55·72	*S*	44·47
25		43·07	43·10	47·32	54·21	61·30	61·82	*S*	58·02	55·62	44·10	Christmas Day
26		42·88	43·40	47·48	*S*	61·10	61·75	62·08	57·73	55·78	43·83	43·60
27		42·77	43·91	47·51	54·58	60·72	61·60	62·12	57·46	*S*	44·50	43·00
28		42·68	44·26	*S*	54·62	60·54	*S*	62·18	57·07	55·41	44·92	42·40
29			Good Friday.	46·68	54·88	60·44	61·63	62·34	*S*	54·92	44·90	*S*
30			44·85	46·61	55·14	*S*	61·77	62·70	57·28	54·41	45·33	41·82
31	39·50		*S*		55·60		61·97	62·78		54·05		41·52
Means.	..	41·15	43·18	46·26	50·39	58·17	61·43	63·28	60·24	57·08	47·33	44·54

At temperatures below 39°·70 the fluid of this thermometer descends below the scale; the readings on those days, which are slightly below this value, are estimated readings only, and therefore liable to some uncertainty. From January 1 to January 30 the readings were all below 39°·70, and mostly less than 39°.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the case which covers the tops of the deep-sunk Thermometers, at the same times.

Day of the Month, 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	40·5	44·0	46·0	45·0	50·2	62·0	63·7	66·3	*S*	62·0	48·1	*S*
2	35·0	40·8	43·3	46·3	51·8	*S*	65·3	67·3	66·3	60·8	43·6	40·0
3	34·3	*S*	*S*	47·8	52·3	59·3	63·7	63·0	66·0	59·5	*S*	41·2
4	32·0	41·0	43·2	48·0	46·3	58·6	64·3	*S*	63·2	60·7	42·6	39·3
5	34·5	43·2	41·8	47·7	*S*	58·3	62·7	67·3	66·7	59·6	50·5	41·3
6	*S*	44·7	47·0	43·7	47·5	57·3	63·7	67·3	67·3	*S*	48·3	40·0
7	32·0	44·2	44·0	*S*	47·0	56·8	*S*	68·1	62·7	61·7	44·3	47·3
8	30·8	43·5	47·7	46·0	48·0	57·3	65·0	66·1	*S*	62·2	43·5	*S*
9	30·8	41·9	45·8	45·7	48·7	*S*	64·0	67·2	62·5	62·0	42·3	47·2
10	28·0	*S*	*S*	46·0	47·7	58·3	64·3	68·0	62·7	58·6	*S*	47·5
11	31·2	38·4	44·0	47·0	47·8	60·5	65·0	*S*	60·2	62·7	44·7	47·3
12	34·5	35·2	42·2	49·8	*S*	62·2	65·3	73·0	62·8	57·5	43·7	48·3
13	*S*	36·8	42·2	47·0	49·2	65·0	66·3	69·7	60·2	*S*	42·6	48·8
14	33·0	36·3	41·6	*S*	51·5	67·5	*S*	69·3	60·8	62·6	43·0	46·0
15	32·2	42·3	46·0	46·7	56·5	68·5	64·3	69·7	*S*	58·3	42·3	*S*
16	31·0	44·2	44·2	50·8	59·5	*S*	65·4	65·8	57·8	57·3	37·3	46·3
17	34·3	*S*	*S*	50·3	57·0	66·3	65·0	64·3	55·8	54·4	*S*	46·0
18	34·1	45·0	40·7	51·0	51·8	66·0	65·0	*S*	57·3	55·2	34·8	45·0
19	34·1	46·0	43·6	49·6	*S*	68·3	64·3	67·3	60·2	53·3	36·0	43·5
20	*S*	43·3	43·0	47·3	57·0	67·3	65·2	65·0	60·2	*S*	41·8	41·3
21	37·0	46·3	42·0	*S*	61·8	69·3	*S*	62·0	57·3	55·6	44·8	41·5
22	36·0	46·0	41·8	46·7	61·3	67·0	65·3	62·7	*S*	57·5	46·0	*S*
23	35·8	46·3	46·8	50·0	64·1	*S*	65·5	64·4	58·0	54·3	41·8	42·6
24	37·0	*S*	*S*	48·0	59·3	65·5	62·7	61·4	57·5	56·3	*S*	41·5
25	43·2	43·2	46·3	49·8	59·5	63·2	65·7	*S*	54·9	58·8	41·3	Christmas Day
26	44·0	43·0	47·0	51·5	*S*	61·7	64·2	63·3	55·1	56·3	49·8	37·0
27	*S*	42·0	48·3	44·8	61·3	64·3	63·3	66·3	55·1	*S*	45·0	35·0
28	43·2	44·0	50·1	*S*	57·3	63·7	*S*	66·8	56·9	52·0	42·6	38·3
29	39·7		Good Friday.	46·8	60·4	65·0	64·8	66·5	*S*	51·3	49·0	*S*
30	38·8		46·0	47·3	64·0	*S*	65·3	65·3	60·7	51·5	51·8	34·8
31	43·0		*S*		62·8		65·5	63·3		51·6		38·0
Means.	35·5	42·6	44·6	47·7	54·9	63·2	64·6	66·2	60·3	57·5	43·9	42·6

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales at the same times.

Day of the Month. 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	43·5	50·8	51·3	46·8	57·3	64·0	71·5	72·5	*S*	70·1	46·4	*S*
2	32·3	43·2	45·8	49·8	59·7	*S*	69·8	76·0	74·0	64·0	40·8	39·8
3	32·9	*S*	*S*	51·3	59·7	61·6	68·6	62·2	69·5	66·5	*S*	43·5
4	28·5	44·7	43·7	53·7	46·8	60·0	65·5	*S*	66·5	68·0	46·0	42·0
5	32·4	45·1	45·3	49·6	*S*	62·7	63·6	76·0	76·0	63·8	53·6	40·8
6	*S*	47·7	53·6	47·2	53·6	57·5	68·8	73·5	70·6	*S*	48·8	42·6
7	28·5	47·3	47·2	*S*	49·2	56·8	*S*	73·5	66·0	66·2	49·8	50·2
8	31·2	45·2	48·0	49·8	49·3	59·0	71·5	66·0	*S*	69·8	46·2	*S*
9	30·9	42·8	49·7	51·3	55·0	*S*	69·5	71·7	67·4	66·3	43·2	52·0
10	23·0	*S*	*S*	55·3	51·8	61·7	68·4	76·0	68·6	64·3	*S*	52·6
11	33·2	38·0	45·0	59·0	47·3	69·2	70·2	*S*	65·8	68·3	49·8	49·2
12	36·5	35·0	43·8	61·3	*S*	66·0	70·8	86·0	72·5	60·2	46·2	51·2
13	*S*	39·7	45·5	55·6	49·7	76·3	67·5	73·6	59·8	*S*	41·3	51·2
14	30·5	40·2	49·2	*S*	62·2	79·8	*S*	76·0	66·0	71·5	45·2	47·3
15	29·0	47·2	51·3	49·8	69·3	79·7	66·2	70·2	*S*	66·2	41·2	*S*

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers—*concluded.*

Day of the Month. 1861.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	28·3	48·8	48·6	60·5	72·3	*S*	69·8	63·7	61·5	56·8	35·7	48·4
17	35·9	*S*	*S*	56·0	56·0	73·5	71·7	70·8	57·2	60·0	*S*	45·0
18	35·7	50·9	44·8	56·7	55·6	73·7	67·3	*S*	65·0	59·6	30·7	46·5
19	34·6	50·5	46·8	53·0	*S*	76·5	63·7	73·5	69·7	60·8	38·5	45·0
20	*S*	45·2	45·1	52·6	69·0	72·5	68·0	69·8	60·3	*S*	47·7	40·9
21	42·0	52·0	44·0	*S*	75·0	75·2	*S*	65·3	61·2	60·2	50·3	40·0
22	39·0	50·8	49·3	51·4	65·2	72·8	68·3	68·8	*S*	60·7	46·0	*S*
23	37·2	48·2	54·3	55·2	76·0	*S*	69·8	70·2	58·0	57·2	42·5	44·2
24	42·0	*S*	*S*	56·3	63·2	71·3	60·8	66·8	64·4	61·2	*S*	42·7
25	50·9	42·2	45·0	53·6	65·2	61·0	67·8	*S*	55·2	62·3	45·5	Christmas-Day.
26	50·0	47·3	51·2	58·8	*S*	64·6	66·3	65·0	57·0	56·9	55·0	35·8
27	*S*	46·8	57·2	38·7	69·2	71·6	68·5	76·2	64·2	*S*	44·8	32·7
28	45·8	46·5	51·7	*S*	56·2	70·2	*S*	78·7	58·0	52·6	45·1	38·8
29	42·0		Good Friday.	51·7	66·8	70·0	71·7	70·5	*S*	55·0	55·0	*S*
30	38·7		46·8	57·6	75·5	*S*	69·8	70·7	71·2	54·0	54·6	30·7
31	49·5		*S*		69·0		71·7	72·2		53·2		38·0
Means.	36·5	45·7	48·2	53·2	60·9	68·3	68·4	71·7	65·0	62·1	45·8	43·6

Weekly Means of Readings of Thermometers.

1861. Period.	Thermometers sunk in the ground. Bulb 24 French Feet deep.	Bulb 12 French Feet deep.	Bulb 6 French Feet deep.	Bulb 3 French Feet deep.	Bulb 1 Inch deep.	Thermometer inclosed in the box which covers the scales of the deep-sunk Thermometers, and placed on a level with their scales.
	°	°	°	°	°	°
January 1 to January 7	50·90	48·57	43·97	...	34·7	33·0
8 to 14	50·75	47·80	...	...	31·4	30·9
15 to 21	50·62	47·14	...	...	33·8	34·2
22 to 28	50·49	46·46	...	...	39·9	44·1
29 to February 4	50·30	45·79	...	...	41·2	44·8
February 5 to 11	50·07	45·43	...	40·77	42·6	44·4
12 to 18	49·84	45·30	...	40·35	40·0	43·6
19 to 25	49·62	45·32	...	42·18	45·2	48·2
26 to March 4	49·39	45·18	44·17	42·82	43·6	46·9
March 5 to 11	49·14	45·18	44·48	43·19	45·1	48·1
12 to 18	48·90	45·26	44·91	43·28	42·8	47·2
19 to 25	48·72	45·32	44·79	42·62	43·9	47·4
26 to April 1	48·52	45·27	44·94	44·28	47·2	50·7
April 2 to 8	48·39	45·40	45·75	45·25	46·6	50·2
9 to 15	48·26	45·56	46·23	45·54	47·0	55·4
16 to 22	48·11	45·67	46·71	47·14	49·3	55·0
23 to 29	48·04	45·98	47·49	47·26	48·5	52·4
30 to May 6	47·96	46·27	47·62	47·12	49·2	55·8
May 7 to 13	47·89	46·45	47·95	47·77	48·1	50·4
14 to 20	47·88	46·67	48·46	49·66	55·6	64·1
21 to 27	47·87	46·96	49·93	53·25	61·2	69·0
28 to June 3	47·86	47·40	51·62	55·43	61·0	65·5
June 4 to 10	47·86	48·07	52·80	55·42	57·8	59·6
11 to 17	47·90	48·77	53·25	56·55	65·0	74·1
18 to 24	47·98	49·34	55·02	61·00	67·2	73·7
25 to July 1	48·06	50·08	56·46	60·76	63·6	68·2
July 2 to 8	48·18	50·86	56·96	60·73	64·1	68·0
9 to 15	48·32	51·52	57·41	61·32	64·9	68·8
16 to 22	48·48	52·08	58·05	61·89	65·0	68·1
23 to 29	48·68	52·61	58·38	61·77	64·4	67·5
30 to August 5	48·89	53·11	58·68	62·14	65·8	71·4
August 6 to 12	49·09	53·56	59·22	63·29	68·3	74·4
13 to 19	49·31	53·99	60·06	64·79	67·7	71·3
20 to 26	49·53	54·45	60·27	63·16	63·1	67·6
27 to September 2	49·76	54·92	60·06	62·47	65·8	73·7
September 3 to 9	49·98	55·16	60·07	62·69	64·7	69·3
10 to 16	50·19	55·33	59·85	61·14	60·8	65·7
17 to 23	50·39	55·47	59·04	59·09	58·1	61·9
24 to 30	50·58	55·41	58·18	57·65	56·7	61·7
October 1 to October 7	50·79	55·32	57·58	57·99	60·7	66·4
8 to 14	51·00	55·19	57·68	58·56	60·9	66·7
15 to 21	51·13	55·07	57·43	57·36	55·7	60·6
22 to 28	51·28	55·02	56·67	55·70	55·9	58·5
29 to November 4	51·37	54·77	55·85	53·63	48·1	49·2
November 5 to 11	51·48	54·49	54·19	49·90	45·6	48·6
12 to 18	51·55	53·96	52·20	47·16	40·6	40·1
19 to 25	51·63	53·29	50·26	44·40	42·0	45·1
26 to December 2	51·68	52·47	49·06	44·92	46·4	49·1
December 3 to 9	51·68	51·68	48·68	44·36	42·7	45·2
10 to 16	51·69	51·05	48·10	45·32	47·4	50·0
17 to 23	51·60	50·50	48·32	45·43	43·3	43·6
24 to 31	51·47	50·02	47·56	42·80	37·4	36·4

ABSTRACT OF THE CHANGES OF THE DIRECTION OF THE WIND, AS DERIVED FROM OSLER'S ANEMOMETER.

By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c., by *retrograde* is meant in the order N., W., S., E., N., &c.

1860. Dec. 31. 12^{h}. The direction of the wind was S.
1861. Jan. 31. 12. ,, ,, S., which implies a retrograde motion of 360°.
On Jan. 0. 22, 4^{d}. 22^{h}, 8^{d}. 3^{h}, the trace was shifted to the next set of lines downwards; on Jan. 5^{d}. 22^{h}, 14^{d}. 22^{h}, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 720°.
Therefore there was no change in the month of January.

1861. Jan. 31^{d}. 12^{h}. The direction of the wind was S.
Feb. 28. 12. ,, ,, S.W., which implies a direct motion of 45°.
On Feb. 11. 22, 26^{d}. 22^{h}, the trace was shifted to the next set of lines upwards; on Feb. 14^{d}. 22^{h}, the trace was shifted to the next set of lines downwards, implying retrograde motion of 720°, and direct motion of 360°.
Therefore the whole excess of retrograde motion in the month of February was 315°.

1861. Feb. 28^{d}. 12^{h}. The direction of the wind was S.W.
March 31. 12. ,, ,, S.W., which implies no change.
On March 25. 22, the trace was shifted to the next set of lines downwards, implying direct motion of 360°.
Therefore the whole excess of direct motion in the month of March was 360°.

1861. March 31^{d}. 12^{h}. The direction of the wind was S.W.
April 30. 12. ,, ,, W.S.W., which implies a direct motion of 22½°.
On April 20. 22, the trace was shifted to the next set of lines downwards, implying direct motion of 360°.
Therefore the whole excess of direct motion in the month of April was 382½°.

1861. April 30^{d}. 12^{h}. The direction of the wind was W.S.W.
May 31. 12. ,, ,, S.W., which implies a retrograde motion of 22½°.
On May 15. 22, 16^{d}. 22^{h}, 19^{d}. 22^{h}, 24^{d}. 22^{h}, the trace was shifted to the next set of lines downwards, implying direct motion of 1440°.
Therefore the whole excess of direct motion in the month of May was 1417½°.

1861. May 31^{d}. 12^{h}. The direction of the wind was S.W.
June 30. 12. ,, ,, N.N.W., which implies a direct motion of 112½°.
On June 2. 22, 4^{d}. 22^{h}, 5^{d}. 22^{h}, the trace was shifted to the next set of lines downwards; on June 6^{d}. 22^{h}, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of June was 832½°.

1861. June 30^{d}. 12^{h}. The direction of the wind was N.N.W.
July 31. 12. ,, ,, S.W., which implies a retrograde motion of 112½°.
On July 2. 22, the trace was shifted to the next set of lines downwards, implying direct motion of 360°.
Therefore the whole excess of direct motion in the month of July was 247½°.

1861. July 31^{d}. 12^{h}. The direction of the wind was S.W.
Aug. 31. 12. ,, ,, W.S.W., which implies a direct motion of 22½°.
On Aug. 13. 22, 26^{d}. 22^{h}, the trace was shifted to the next set of lines downwards; on Aug. 20^{d}. 22^{h}, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of August was 382½°.

1861. Aug. 31d. 12h. The direction of the wind was **W.S.W.**
Sept. 30. 12. ,, ,, **S.S.W.**, which implies a retrograde motion of 45°.
On Sept. 11. 22, the trace was shifted to the second set of lines downwards; on Sept. 22d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of September was 315°.

1861. Sept. 30d. 12h. The direction of the wind was **S.S.W.**
Oct. 31. 12. ,, ,, **S.S.W.**, which implies no change.
On Oct. 3. 22, 4d. 3h, 7d. 22h, 21d. 22h, the trace was shifted to the next set of lines downwards, implying direct motion of 1440°.
Therefore the whole excess of direct motion in the month of October was 1440°.

1861. Oct. 31d. 12h. The direction of the wind was **S.S.W.**
Nov. 30. 12. ,, ,, **W.S.W.**, which implies a direct motion of 45°.
On Nov. 13. 19½, the trace was shifted to the next set of lines upwards; on Nov. 24d. 22h, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 360°.
Therefore the whole excess of direct motion in the month of November was 45°.

1861. Nov. 30d. 12h. The direction of the wind was **W.S.W.**
Dec. 31. 12. ,, ,, **N.N.E.**, which implies a direct motion of 135°.
On Dec. 2. 22, the trace was shifted to the next set of lines downwards; and on Dec. 23d. 22h, to the second set downwards; on Dec. 26d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of December was 855°.

The whole excess of direct motion to the end of the year was 5962½°.

The revolution-counter which is attached to the vertical spindle of the vane, whose readings increase with change of direction of the wind in the order N., E., S., W., &c., or in direct motion, and decrease with change of direction in the order N., W., S., E., &c. or in retrograde motion, gave the following readings:—

	revs.
On 1860, December 31d. 12h.	37·50
1861, December 31. 12.	54·00

Implying an excess of direct motion, during the year, of 16·5 revolutions, or 5940°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1861.

1861, MONTH.	Monthly Amount of Rain collected in each Gauge.						
	Osler's Anemometer Gauge.	On the Roof of the Octagon Room.	On the Roof of the Library.	On the Roof of the Photographic Thermometer Shed.	Crosley's.	Cylinder partly sunk in the Ground read Daily.	Cylinder partly sunk in the Ground read Monthly.
	in.	in.	in.	in.	in.	in.	in.
January - -	0·2	..	0·3	..	0·5	..	0·6
February - -	1·0	..	1·4	..	1·7	..	1·8
March - -	1·1	..	1·6	..	2·2	..	2·2
April - -	0·8	..	0·8	..	0·9	0·8	0·8
May - - -	1·1	1·4	1·5	1·7	1·5	1·8	1·6
June - - -	1·3	1·7	1·7	1·8	1·7	1·9	1·8
July - - -	1·7	2·0	1·9	2·2	1·9	2·2	2·1
August - -	0·3	0·4	0·4	0·5	0·5	0·6	0·6
September - -	0·9	1·2	1·1	1·4	1·2	1·5	1·5
October - -	0·6	0·7	0·7	0·9	0·8	0·9	0·9
November - -	3·0	3·9	3·8	5·0	3·6	5·1	5·2
December - -	0·9	1·0	0·9	1·2	1·1	1·2	1·3
Sums - -	12·9	..	16·1	..	17·6	..	20·4

The heights of the receiving surfaces are as follows:

	Above the Mean Level of the Sea.			Above the Ground.	
	Ft.	In.		Ft.	In.
Osler's Anemometer Gauge	205	6	.....	50	8
Gauge on the Roof of the Octagon Room	193	$2\frac{1}{2}$	.....	38	$4\frac{1}{2}$
Gauge on the Roof of the Library.....	177	2	.....	22	4
Gauge on the Roof of the Photographic Thermometer Shed	164	10	.....	10	0
Crosley's Gauge	156	6	.....	1	8
The Two Cylinder Gauges partly sunk in Ground.....	155	3	.....	0	5

ROYAL OBSERVATORY, GREENWICH.

APPENDIX

TO

RESULTS OF THE MAGNETICAL AND METEOROLOGICAL OBSERVATIONS

1861:

CONTAINING

OBSERVATIONS

OF THE

MAGNETIC DIP

1856.

In the "Results of the Magnetical and Meteorological Observations 1856," page cxxxiv, it was stated that, in consequence of an injudicious use of the Dipping Needle there described, it was feared that the Observations of Dip in 1856 were useless, and their publication was therefore suppressed.

On comparing the results of the year 1856 with those of subsequent years, in which the Needle was used in an unobjectionable manner, it appears that they fall into series so well with the others that there is no sufficient reason for suppressing them; and they are therefore now exhibited in the usual form.

There is much greater discordance among the annual results than I could wish; but I am unable to assign its cause.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, in the Year 1856.

Day and Approximate Hour, 1856.		Magnetic Dip.	Needle.	Day and Approximate Hour, 1856.		Magnetic Dip.	Needle.
	d h	° ′			d h	° ′	
January	7. 21	68. 44 ·00	A 1	June	29. 21	68. 42 ·25	A 1
	8. 3	68. 45 ·00	A 1		30. 3	68. 41 ·75	A 1
	13. 21	68. 41 ·25	A 1				
	14. 3	68. 45 ·50	A 1	July	7. 21	68. 42 ·50	A 1
	28. 21	68. 46 ·00	A 1		8. 2	68. 43 ·75	A 1
	29. 3	68. 46 ·25	A 1		20. 21	68. 43 ·25	A 1
					21. 2	68. 44 ·50	A 1
February	3. 21	68. 44 ·50	A 1		27. 21	68. 45 ·00	A 1
	4. 3	68. 46 ·75	A 1		28. 3	68. 44 ·50	A 1
	10. 21	68. 45 ·00	A 1				
	11. 3	68. 45 ·25	A 1	August	3. 21	68. 41 ·25	A 1
	17. 21	68. 46 ·75	A 1		4. 2	68. 44 ·50	A 1
	18. 3	68. 49 ·25	A 1		10. 21	68. 43 ·75	A 1
	24. 21	68. 52 ·50	A 1		11. 3	68. 44 ·50	A 1
	25. 3	68. 36 ·00	A 1		17. 21	68. 43 ·75	A 1
					18. 3	68. 47 ·50	A 1
March	2. 21	68. 43 ·50	A 1		24. 21	68. 36 ·50	A 1
	3. 3	68. 43 ·50	A 1		25. 3	68. 27 ·25	A 1
	9. 21	68. 40 ·00	A 1				
	10. 3	68. 41 ·50	A 1	September	0. 21	67. 52 ·75	A 1
	17. 21	68. 45 ·25	A 1		1. 3	68. 39 ·00	A 1
	18. 3	68. 44 ·00	A 1		7. 21	68. 37 ·75	A 1
	23. 21	68. 47 ·25	A 1		8. 3	68. 40 ·00	A 1
	24. 3	68. 44 ·25	A 1		14. 21	68. 1 ·75	A 1
	30. 21	68. 44 ·25	A 1		14. 23	68. 42 ·50	A 2
	31. 3	68. 45 ·50	A 1		15. 3	68. 49 ·00	A 2
					21. 21	68. 47 ·75	A 2
April	6. 21	68. 47 ·25	A 1				
	7. 2	68. 43 ·75	A 1	October	14. 21	68. 33 ·50	A 2
	13. 21	68. 44 ·25	A 1		14. 22	68. 37 ·75	A 1
	14. 3	68. 45 ·00	A 1		19. 21	68. 35 ·00	A 2
	20. 21	68. 44 ·25	A 1		20. 3	68. 36 ·25	A 2
	21. 3	68. 46 ·75	A 1		26. 23	68. 35 ·50	A 1
	27. 21	68. 46 ·50	A 1		27. 2	68. 36 ·00	A 1
	28. 2	68. 46 ·50	A 1				
				November	2. 21	68. 37 ·50	A 1
May	4. 21	68. 45 ·00	A 1		3. 3	68. 39 ·25	A 1
	5. 2	68. 42 ·75	A 1		9. 21	68. 39 ·00	A 1
	11. 21	68. 44 ·75	A 1		10. 3	68. 39 ·75	A 1
	12. 2	68. 45 ·25	A 1		24. 22	68. 54 ·75	A 1
	18. 21	68. 46 ·50	A 1		24. 23	69. 1 ·00	A 2
	19. 3	68. 45 ·25	A 1				
	25. 21	68. 44 ·75	A 1	December	0. 21	68. 45 ·50	A 1
	26. 3	68. 44 ·00	A 1		1. 3	68. 49 ·75	A 1
					7. 21	68. 42 ·25	A 1
June	1. 21	68. 45 ·50	A 1		8. 3	68. 47 ·25	A 1
	2. 3	68. 45 ·00	A 1		14. 21	68. 47 ·50	A 1
	8. 21	68. 44 ·00	A 1		15. 3	68. 46 ·00	A 1
	9. 3	68. 43 ·75	A 1		21. 21	68. 48 ·25	A 1
	15. 21	68. 46 ·25	A 1		22. 3	68. 46 ·25	A 1
	16. 3	68. 45 ·25	A 1		28. 21	68. 45 ·00	A 1
	22. 21	68. 44 ·75	A 1		29. 3	68. 45 ·00	A 1
	23. 2	68. 44 ·00	A 1				

The observations on September 1^{d}. 3^{h}. and 14^{d}. 23^{h}. were taken in consequence of the anomalous results of the observations immediately preceding them : and, on September 14, A_2 was introduced.

September 22 to October 14. The needles were in the hands of the maker for repair.

The observations of September are omitted in the following mean.

MONTHLY MEANS of MAGNETIC DIPS, at the ROYAL OBSERVATORY, GREENWICH, in the Year 1856.

1856, Month.	Barrow, A 1.	Number of Observations.	Barrow, A 2.	Number of Observations.
	° ′		° ′	
January	68. 44 ·66	6	....	...
February	68. 45 ·75	8	....	...
March	68. 43 ·90	10	....	...
April	68. 45 ·53	8	....	...
May	68. 44 ·78	8	....	...
June	68. 44 ·25	10	....	...
July	68. 43 ·92	6	....	...
August	68. 41 ·12	8	....	...
September	....	...	....	...
October	68. 36 ·42	3	68. 34 ·92	3
November	68. 42 ·05	5	69. 1 ·00	1
December	68. 46 ·28	10	....	...
Mean	68. 43 ·51	...	....	...

As there appeared to be no marked difference between Observations taken at 21^h and 3^h, the Monthly Means have been taken irrespectively of the hours of Observation.

ROYAL OBSERVATORY, GREENWICH.

CORRECTION

OF

NUMBERS

IN THE

"RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,"

1856, 1857, 1859, 1860.

In the "Results of Magnetical and Meteorological Observations;" 1856, page (cxxviii); 1857, page (cxxxviii); 1859, page (cxxxviii) and 1860, page (cxxvi) values were inadvertently printed as *Adopted Values of a*, which were not in fact computed with the aid of the Mean Value of *b*. The subsequent numbers were free from error, all calculations having been made with the true *Adopted Values of a*.

The following are the correct numbers:—

ADOPTED Values of *a*, after application of Mean Value of *b*.

1856.			1857.			1859.			1860.		
January	23	+ 0·16380	January	22	+ 0·15564	January	13	+ 0·14967	January	16	+ 0·14576
February	15	+ 0·16156	February	4	+ 0·15605	February	14	+ 0·14930	February	7	+ 0·14560
March	31	+ 0·16462	March	18	+ 0·15688	March	2	+ 0·15027	March	19	+ 0·14391
May	20	+ 0·15963	April	28	+ 0·15956	April	4	+ 0·14930	April	4	+ 0·14529
June	9	+ 0·15912	May	13	+ 0·15855	May	6	+ 0·15007	June	11	+ 0·14352
July	1	+ 0·15968	June	3	+ 0·15751	June	8	+ 0·14874	July	26	+ 0·14449
August	16	+ 0·15883	August	27	+ 0·15493	July	6	+ 0·14862	August	21	+ 0·14364
September	12	+ 0·16127	September	25	+ 0·15543	August	12	+ 0·14913	September	3	+ 0·14317
October	14	+ 0·16047	October	27	+ 0·15454	September	12	+ 0·14802	October	22	+ 0·14506
November	7	+ 0·15983	December	9	+ 0·15581	October	5	+ 0·14813	November	19	+ 0·14520
December	11	+ 0·15445				November	3	+ 0·15415	December	18	+ 0·14563
						December	9	+ 0·15550			

In the "Reduction of the Magnetic Observations made at the Royal Observatory, Greenwich, from 1848 to 1857," attached to the Volume of "Results of Magnetical and Meteorological Observations, 1859," are two tables, namely, Table XI., page (ccviii), and Table XVI., page (ccxix), which are affected with very slight inaccuracies.
It is requested that the following Tables may be substituted for those in the Volume for 1859.

TABLE XI.—MEAN, through the Range of Months, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of HORIZONTAL FORCE; exhibited separately for the different Years.

Hour, Göttingen Mean Solar Time.	January to December.										Mean 1848 to 1857.
	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	
0	−0·00164	−0·00137	−0·00134	−0·00114	−0·00133	−0·00097	−0·00082	−0·00086	−0·00086	−0·00102	−0·00113
1	− 128	− 101	− 87	− 87	− 107	− 78	− 59	− 57	− 67	− 91	− 86
2	− 76	− 45	− 38	− 53	− 84	− 58	− 45	− 45	− 53	− 70	− 57
3	− 20	− 4	− 3	− 27	− 36	− 31	− 27	− 23	− 44	− 55	− 27
4	+ 3	+ 18	+ 17	− 18	− 25	− 14	− 23	− 17	− 39	− 42	− 14
5	+ 32	+ 42	+ 33	− 8	+ 1	+ 3	− 17	− 14	− 33	− 33	+ 1
6	+ 59	+ 65	+ 53	+ 13	+ 24	+ 21	− 4	− 10	− 21	− 20	+ 18
7	+ 68	+ 66	+ 52	+ 24	+ 30	+ 34	+ 12	+ 3	− 7	− 2	+ 28
8	+ 71	+ 60	+ 54	+ 23	+ 35	+ 29	+ 10	+ 10	− 1	+ 2	+ 29
9	+ 57	+ 41	+ 34	+ 24	+ 31	+ 23	+ 4	+ 3	+ 5	+ 6	+ 23
10	+ 48	+ 40	+ 33	+ 27	+ 27	+ 27	+ 9	+ 8	+ 2	+ 10	+ 23
11	+ 37	+ 35	+ 27	+ 28	+ 33	+ 23	+ 13	+ 15	+ 14	+ 21	+ 25
12	+ 41	+ 28	+ 21	+ 30	+ 40	+ 23	+ 18	+ 17	+ 24	+ 31	+ 27
13	+ 30	+ 22	+ 23	+ 23	+ 37	+ 18	+ 18	+ 23	+ 30	+ 33	+ 26
14	+ 32	+ 25	+ 25	+ 28	+ 43	+ 24	+ 27	+ 29	+ 32	+ 36	+ 30
15	+ 30	+ 28	+ 26	+ 33	+ 36	+ 31	+ 34	+ 29	+ 38	+ 46	+ 33
16	+ 37	+ 32	+ 34	+ 46	+ 47	+ 40	+ 38	+ 37	+ 52	+ 51	+ 41
17	+ 48	+ 36	+ 36	+ 58	+ 53	+ 44	+ 51	+ 45	+ 62	+ 60	+ 49
18	+ 44	+ 37	+ 42	+ 56	+ 66	+ 51	+ 51	+ 53	+ 64	+ 68	+ 53
19	+ 28	+ 23	+ 45	+ 51	+ 52	+ 46	+ 57	+ 49	+ 66	+ 66	+ 48
20	− 9	− 20	+ 14	+ 23	+ 78	+ 21	+ 35	+ 29	+ 43	+ 44	+ 20
21	− 68	− 75	− 43	− 17	− 31	− 17	− 2	+ 3	+ 2	+ 15	− 23
22	− 117	− 114	− 103	− 61	− 87	− 61	− 45	− 38	− 46	− 33	− 71
23	− 148	− 134	− 138	− 102	− 128	− 94	− 74	− 64	− 77	− 76	− 104

TABLE XVI.—MEAN, through the Range of Months, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of VERTICAL FORCE; exhibited separately for the different Years.

Hour, Göttingen Mean Solar Time.	January to December.									Mean 1849 to 1857.	Mean in Terms of Horizontal Force.
	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.		
0	+0·00016	+0·00102	+0·00077	+0·00090	+0·00145	+0·00155	+0·00154	+0·00160	+0·00120	+0·00113	+0·00291
1	+ 30	+ 107	+ 66	+ 98	+ 143	+ 151	+ 142	+ 142	+ 102	+ 109	+ 281
2	+ 49	+ 99	+ 46	+ 78	+ 108	+ 120	+ 112	+ 113	+ 60	+ 87	+ 224
3	+ 68	+ 76	+ 18	+ 43	+ 65	+ 77	+ 36	+ 58	+ 3	+ 49	+ 126
4	+ 47	+ 32	− 12	+ 9	+ 2	+ 9	− 27	+ 5	− 39	+ 3	+ 8
5	+ 38	− 13	− 40	− 22	− 45	− 50	− 78	− 57	− 80	− 39	− 101
6	+ 24	− 41	− 50	− 44	− 74	− 86	− 110	− 99	− 111	− 66	− 170
7	− 4	− 76	− 69	− 63	− 105	− 122	− 145	− 133	− 134	− 95	− 245
8	− 31	− 97	− 90	− 85	− 126	− 125	− 162	− 157	− 156	− 114	− 294
9	− 55	− 127	− 110	− 106	− 147	− 157	− 181	− 171	− 168	− 136	− 351
10	− 61	− 152	− 117	− 118	− 163	− 172	− 187	− 173	− 171	− 146	− 377
11	− 62	− 158	− 109	− 113	− 156	− 175	− 173	− 169	− 155	− 141	− 364
12	− 42	− 136	− 77	− 97	− 146	− 156	− 149	− 143	− 123	− 119	− 307
13	− 40	− 101	− 43	− 73	− 114	− 127	− 99	− 107	− 75	− 87	− 224
14	− 28	− 63	− 15	− 41	− 72	− 88	− 57	− 74	− 21	− 51	− 132
15	− 8	− 17	+ 25	− 3	− 40	− 38	− 4	− 32	+ 18	− 11	− 28
16	+ 4	+ 19	+ 45	+ 33	+ 7	+ 14	+ 42	+ 13	+ 61	+ 26	+ 67
17	+ 20	+ 52	+ 58	+ 48	+ 40	+ 48	+ 75	+ 51	+ 89	+ 53	+ 137
18	+ 18	+ 66	+ 59	+ 53	+ 70	+ 89	+ 98	+ 83	+ 109	+ 72	+ 186
19	+ 12	+ 69	+ 61	+ 60	+ 89	+ 97	+ 116	+ 105	+ 123	+ 81	+ 209
20	+ 6	+ 73	+ 60	+ 53	+ 106	+ 110	+ 126	+ 123	+ 130	+ 87	+ 224
21	+ 7	+ 78	+ 57	+ 52	+ 118	+ 123	+ 141	+ 142	+ 135	+ 95	+ 249
22	+ 7	+ 91	+ 65	+ 71	+ 129	+ 138	+ 152	+ 156	+ 128	+ 104	+ 268
23	+ 8	+ 106	+ 78	+ 78	+ 145	+ 148	+ 162	+ 165	+ 135	+ 114	+ 294

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RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

1862.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1862.)

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GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1862.

Introduction.

§ 1. *Buildings of the Magnetic Observatory.*

In consequence of a representation by the Astronomer Royal, and a memorial by the Board of Visitors of the Royal Observatory, addressed to the Lords Commissioners of the Admiralty, an additional space of ground on the south-east side of the former boundary of the Observatory grounds was inclosed from Greenwich Park for the site of a Magnetic Observatory, in the summer of 1837, and the Magnetic Observatory was erected in the spring of 1838. Its nearest angle in its present form is about 174 feet from the nearest point of the S.E. dome, and about 30 feet from the office of Clerk of Works. It is based on concrete and built of wood, united for the most part by pegs of bamboo; no iron was admitted in its construction, or in subsequent alterations. Its form, as originally built, was that of a cross with four equal arms, very nearly in the direction of the cardinal magnetic points as they were in 1838; the length within the walls, from the extremity of one arm of the cross to the extremity of the opposite arm, was 40 feet, the breadth of each arm is 12 feet. In the spring of 1863, the northern arm was extended 8 feet. The height of the walls inside is 10 feet, and the ceiling of the room is about 2 feet higher. The northern arm of the cross is separated from the central square by a partition, so as to form an ante-room. The meridional magnet (placed in its position in 1838) is mounted in the southern arm; and the theodolite by which it is viewed, and by which circumpolar stars for determination of the astronomical meridian are also observed (for which observation an opening is made in the roof, with proper shutters) is in the southern arm, near the southern boundary of the central square. The bifilar magnet, for variations of horizontal magnetic force (erected at the end of 1840) is mounted near the northern wall of the eastern arm. The horizontal photographic cylinder, which receives the traces of the

movements of the declination-magnet and the horizontal-force-magnet, is near the south-eastern re-entering angle of the building. The balance-magnetometer for variations of vertical magnetic force (erected in 1841) is mounted near the northern wall of the western arm. About 8 feet east of it, and close to that wall, is the self-registering barometer (erected in 1848); and the vertical photographic cylinder which receives the traces of both is east (magnetic) of the balance magnetometer and south of the barometer. The stands of the telescopes which are directed to the small reflectors of the horizontal-force and vertical-force magnetometers are near the theodolite, so that a person seated on a stool can conveniently command all three instruments. The mean-time-clock is in the southern arm, near the south-west re-entering angle; the standard barometer is near it, in the western arm; the sidereal-time-clock is near the self-registering barometer; the fire-grate (constructed of copper, as far as possible) is near the middle of the west side of the ante-room. Some of these fixtures may contain trifling quantities of iron; and, as the ante-room is used as a computing room, it is impossible to avoid the introduction of iron, in small quantities. On the outside near the north-east corner of the ante-room, a pole 79 feet in height is fixed, for the support of the conducting wires to the electrometers; the electrometers, &c., are planted in the window-seat at the north end of the ante-room. The apparatus for naphthalizing the gas used in the photographic registration was formerly fixed in a corner of the ante-room, but is now (1864) mounted in a small detached zinc-built room, erected in 1863, near the west side of the ante-room.

A small wooden building, in the direction S.S.E. (magnetic) from the Magnetic Observatory, 64 feet from its nearest angle, and very near the southern boundary of the grounds, was used till 1863 for the observation of Magnetic Dip and Deflexion. In 1863 this building was removed, and a range of seven rooms, usually called the Magnetic Offices, was erected near the southern fence of the grounds. Since the summer of 1863, observations of Dip and Deflexion have been made in the western-most of these rooms.

For better understanding of these descriptions, the reader is referred to the Descriptions of Buildings and Grounds with accompanying Maps, attached to the Volumes of Astronomical Observations for the years 1845 and 1862.

At the present time (1864) a room has been excavated below the whole of the Magnetic Observatory, except the ante-room, and is nearly prepared for the reception of instruments. It is expected that the daily variations of temperature will be greatly diminished.

§ 2. *Declination-Magnet and Apparatus for observing it.*

The theodolite with which the meridional magnet is observed is by Simms: the radius of its horizontal circle is 8·3 inches: it is divided into 5′, and reads to 5″ by

three verniers, carried by the revolving frame of the theodolite. The fixed frame stands upon three foot-screws, which rest in brass channels let into a stone pier, that is firmly fixed in the ground and unconnected with the floor. The revolving frame carries the Y's (with vertical adjustment at one end) for a telescope with transit-axis: the length of the axis is $10\frac{1}{2}$ inches: the length of the telescope 21 inches: the aperture of the object glass 2 inches. The Y's are not carried immediately by the T head which crosses the vertical axis of the revolving frame, but by pieces supported by the ends of that T head, and projecting horizontally from it: the use of this construction is to allow the telescope to be pointed sufficiently high to see δ Ursæ Minoris above the pole. The eye-piece of the telescope carries only one fixed horizontal wire, and one vertical wire moved by a micrometer-screw. The opening in the roof of the building permits the observation of circumpolar stars, as high as δ Ursæ Minoris above the pole, and as low as β Cephei below the pole.

For supporting the magnet, a braced wooden tripod-stand is provided, resting on the ground and unconnected with the floor. Upon the cross-bars of the stand rests a double rectangular box (one box completely inclosed within another), both boxes being covered with gilt paper, on their exterior and interior sides. On the southern side of the principal upright piece of the stand is a moveable upright bar, turning in the vertical E. and W. plane, upon a pin in its centre (which is fixed in the principal upright), and carrying at its top the pulleys for suspension of the magnet; this construction is adopted as convenient for giving an E. and W. movement to the point of suspension, by giving a motion to the lower end of the bar. The top of the upright piece carries a brass frame with two pulleys, whose axes are E. and W.: one of these pulleys projects beyond the north side of the principal upright, and from it depends the suspension skein: the other pulley projects on the south side: the suspension skein being brought from the magnet up to the north pulley is carried over it and over the south pulley, and is then attached to a leathern strap, which passes downwards to a small windlass, carried by the lower part of the moveable upright. The height of the two pulleys above the floor is about 11 ft. 9 in., and the height of the magnet is about 3 ft. 0 in.; so that the length of the free suspending skein is about 8 ft. 9 in.

The magnet was made by Meyerstein, of Göttingen: it is a bar 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick: it is of hard steel throughout. The magnet carrier was also made by Meyerstein, but it has since been altered under my direction by Simms. The magnet is not now inserted endways in its support, but sideways, a double square hook being provided for sustaining it; and the upper part of the magnet-carrier is simply hooked into the skein.

The suspending skein is of silk fibre, in the state in which it is first prepared by silk manufacturers for further operations; namely, when seven or more fibres from the cocoon are united by juxtaposition only (without twist) to form a single thread. The

skein is strong enough to support perhaps six times the weight of the magnet, &c. I judged this strength to be necessary, having found that a weaker skein broke ultimately even with a smaller weight.

Upon the magnet there slide two brass frames, firmly fixed in their places by means of pinching-screws. One of these contains, between two plane glasses, a cross of delicate cobwebs; the other holds a lens of 13 inches focal length and nearly 2 inches aperture. This combination, therefore, serves as a collimator without a tube: the cross of cobwebs is seen very well with the theodolite-telescope, when the suspension-bar of the magnet is so adjusted as to place the object-glass of the collimator in front of the object-glass of the theodolite, their axes coinciding. The wires are illuminated by a lamp and lens in the night, and by a reflector in the day.

In order to diminish the extent of vibrations of the magnet, a copper bar, about one inch square, is bent into a long oval form, intended to contain within itself the magnet (the plane of the oval curve being vertical). A lateral bend is made in the upper half of the oval, to avoid interference with the suspension-piece of the magnet. The effect of this copper bar is very striking. It appears, from rough experiments, that every second vibration of the magnet (that is, when a direct and reverse swing have been finished) is reduced in the proportion of 5 : 2 nearly.

On mounting the photographic apparatus in June, 1847, the old torsion-circle and suspension-stirrup were removed, and a new suspension-stirrup was mounted, firmly united with an upright rod 7·9 inches in length, the top of which is connected by an adjustible circular horizontal movement (firmly clamped while in use) to an upright frame $5\frac{1}{2}$ inches high, to which are attached the necessary clips for carrying a concave mirror, 5 inches in diameter, with its face vertical, and its lower edge 4 inches above the exterior wooden box. At the top of this frame is a torsion-circle with a hook, which is simply hooked into the end of the silk skein. The skein is necessarily shortened several inches, and the weight of the suspending apparatus is considerably increased. The support of the magnet by this new apparatus does not in any degree interfere with the facilities of observing with the telescope in the ancient method.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE DECLINATION-MAGNET AND ITS THEODOLITE.

1. Determination of the inequality of the pivots of the theodolite-telescope.

1846. December 22. The theodolite was clamped, so that the transit axis was at right angles to the astronomical meridian. The illuminated end of the axis of the telescope was first placed to the East: the level was applied, and its scale was read; the level was then reversed, and its scale was again read; it was then again reversed,

and again read, and so on successively six times. The illuminated end of the telescope was then placed to the West, and the level was applied and read as before. This process was repeated four times, and the result was that, when the level indicates the axis to be horizontal, the axis at the illuminated end is really too low by 1″·5 nearly. This has been confirmed by less careful observations made at different times since 1846.

2. Value of one revolution of the micrometer-screw of the theodolite-telescope.

1846, December 23. The magnet was made to rest on blocks of wood, and the collimator was used as a fixed mark at an infinite distance. The micrometer was placed in different positions, and the telescope of the theodolite was then turned till the micrometer wire bisected the cross. The result of ten comparisons of theodolite-readings with large values and small values of the micrometer-reading was that one revolution = 1′. 34″. This has been confirmed by observations made in several subsequent years.

3. Determination of the micrometer-reading for the line of collimation of the theodolite-telescope.

1862, January. The vertical axis of the theodolite had been adjusted to verticality, and the transit axis was made horizontal. The declination-magnet was made to rest on blocks, and the cross-wires carried by it were used as a collimator for determining the line of collimation of the telescope of the theodolite. The telescope was reversed after each observation. The mean of 20 double observations was 100ʳ·351.

4. Determination of the effect of the mean-time-clock on the declination-magnet.

The observations by which this has been determined are detailed in the volumes for 1840, 1841, 1844, and 1845. It appears that it is necessary to add 9″·41 to every reading of the theodolite.

5. Determination of the compound effects of the vertical-force-magnet and the horizontal-force-magnet on the declination-magnet.

The details applying to the effect of the horizontal-force-magnet and first vertical-force-magnet will be found in the volumes for 1840, 1841, 1844, and 1845. It appeared that it was necessary to subtract 55″·22 from all readings of the theodolite. In 1848 a new vertical-force-magnet was introduced, and the subtractive quantity was now found to be 42″·2.

6. Determination of the error of collimation for the plane glass in front of the boxes of the declination-magnet.

1862, January. The magnet was made to rest entirely on blocks. The micrometer-head of the telescope was to the East. The plane glass has the word "top" engraved on it, and this word is always kept upwards. The cross-wire carried by the collimator of the magnet was observed with the marked side of the glass alternately inside and outside the box. The result of 20 double observations was that, in the ordinary position of the glass, $10''{\cdot}4$ is to be subtracted from all readings.

7. Determination of the error of collimation of the magnet-collimator, with reference to the magnetic axis of the magnet.

1862, January. A small magnet (usually employed in Deflexion experiments) was suspended in the dip house: a reflector was attached to its center, and a telescope with a wire in its focus was directed to the reflector. A scale of numbers was fixed just below the object-glass of the telescope. An observer continued to observe the reflected image of the scale, while the observations of the magnet-collimator were proceeding; but as it was afterwards found that they exhibited no change in the direction of terrestrial magnetism which would influence the result of the observations of the magnet-collimator, they were omitted in the calculations. The observations were made by placing the Declination-Magnet in its stirrup, with its collimator alternately W. and E. of it, and observing the collimator-wire by the theodolite-telescope; the moveable upright bar being so moved that the collimator in each observation was in the line of the theodolite-telescope. Six pairs of observations were taken. The mean half excess of reading with collimator W. (its usual position) above that with collimator E. was $-4'.\ 43''{\cdot}4$. This was combined with the results of several preceding years, and $-4'.\ 49''{\cdot}1$ was adopted for use.

8. Miscellaneous causes of error.

In the volume for 1841, observations are exhibited shewing that the oval copper bar, or damper, had but little or no effect. Repeated observations, of less formal character, in succeeding years, have confirmed this result. The same bar has encircled the magnet throughout the year 1862.

In the volume for 1841, observations are exhibited shewing that the effect of the grate in the ante-room is insensible.

In the volume for 1842, observations are exhibited shewing that the iron attached to the electrometer pole has little or no effect on the magnet.

9 Calculation of the constant used in the reduction of the observations of the declination-magnet, the micrometer-head of the theodolite-telescope being East.

		° ′ ″
Micrometer equivalent for reading for line of collimation, 100r·351	−	2. 37. 20·0
Correction for the plane glass in front of the box, in its usual position	−	10·4
Correction due to the compound effect of the horizontal force magnet and the vertical force magnet	−	42·2
	−	2. 38. 12·6
Correction for the effect of the mean time clock	+	9·4
	−	2. 38. 3·2
The collimator West of the magnet. Correction for Error of collimation	+	4. 49·1
Constant used in the reduction of the observations	−	2. 33. 14·1

10. Determination of the time of vibration of the declination-magnet under the action of terrestrial magnetism.

It is known, from constant observation, that the time of a single vibration is as nearly as possible 30ˢ; but no observations are recorded which merit distinct reference.

11. Fraction expressing the proportion of the torsion-force to the earth's magnetic force.

In the Introduction to the Magnetical Observations 1847, the process is given in great detail by which the torsion-force of the skein then supporting the magnet was found to be $\frac{1}{100}$ of the earth's magnetic force: as determined by the proportion of the disturbance in the position of the magnet, produced by turning the torsion-circle through a measured angle, to that measured angle. For the skein (which broke in 1848) a similar skein was substituted; and observations made in nearly every year to 1864, gave sensibly the same result.

DETERMINATION OF THE READINGS OF THE HORIZONTAL CIRCLE OF THE THEODOLITE CORRESPONDING TO THE ASTRONOMICAL MERIDIAN.

The error of the level is determined by application of the spirit-level at the time of observation: due regard being paid, in the reduction, to the inequality of pivots already found. One division of the level is considered = 1″·0526. The azimuth-reading is then corrected by this quantity;

Correction = Elevation of W. end of axis × tan star's altitude.

The readings of the azimuth circle increase as the instrument is turned from N. to E., S., and W.; from which it follows that the correction must have the same sign as the elevation of the W. end.

The correction for the azimuth of the star observed has been computed independently in every observation, by a peculiar method, of which the principle is fully explained

in the volumes for 1840, 1841, 1843, 1844, 1845. The formula and table used are the following:—

Let $A_{//}$ = seconds of arc in star's azimuth,
C_s = seconds of time in star's hour-angle,
$a_{//}$ = seconds of arc in star's N.P.D. for the day of observation,
Then log. $A_{//}$ = log. C_s + log. E + log. $(a_{//} + F)$ + log. cos φ.

The values of log. E, F, and log. cos φ, are given in the following table:—

TABULATED VALUES of LOG. COS ϕ, for DIFFERENT VALUES of C_s, and of the QUANTITIES LOG. E and F, for the STARS POLARIS and δ URSÆ MINORIS.

Hour Angle.	Log. Cos ϕ for			
	Polaris.	δ Ursæ Minoris.	Polaris S.P.	δ Ursæ Min. S.P.
m				
1	9·99999	9·99999	9·99999	9·99999
2	999	999	999	999
3	999	999	999	999
4	998	998	998	998
5	996	996	997	997
6	994	994	996	996
7	992	992	994	995
8	990	989	992	993
9	988	986	990	991
10	985	983	988	989
11	981	979	985	987
12	978	975	982	984
13	974	971	979	981
14	970	966	975	978
15	966	961	972	975
16	961	955	968	971
17	956	950	964	968
18	951	944	959	964
19	945	937	955	960
20	939	930	950	956
21	932	923	945	951
22	926	915	939	946
23	919	908	933	941
24	912	900	928	936
25	904	891	922	930
26	896	882	915	925
27	888	873	909	919
28	880	863	902	912
29	871	853	894	906
30	9·99862	9·99843	9·99887	9·99900
Log. E	6·09721	6·13638	−6·03899	−6·00617
F	−186″·79	−944″·71	+181″·57	+886″·86

Observations for determining the readings for the astronomical meridian, were made on the following days in 1862:—January 16, February 18, March 12, April 23, 29, May 2, 16, June 18, July 12, 26, August 7, 28, September 10, October 22, December

1, 2, and 10. As a check on the continued steadiness of the theodolite, observations of a fixed mark (a small hole in a plate of metal above the Observatory Library, illuminated by a reflector of sky-light in the day and by a lamp at night,) have been frequently taken in the periods intervening between the observations of stars.

The following is a description of the method of making and reducing the eye-observations of the declination-magnet :—

A fine horizontal wire (as stated above) is fixed in the field of view of the theodolite-telescope, and another fine vertical wire is fixed to a wire-plate, moved right and left by a micrometer screw. On looking into the telescope, the cross of the magnetometer is seen ; and during the vibration of the magnet, this cross is seen to pass alternately right and left. The observation is made by turning the micrometer till its wire bisects the image of the magnet-cross at the pre-arranged times, and reading the micrometer. The verniers of the horizontal circle are read.

The mean-time clock is kept very nearly to Greenwich mean time (its error being ascertained each day), and the clock-time for each determination is arranged beforehand.

If the magnet is in a state of disturbance, the first observation is made by the observer applying his eye to the telescope about one minute before the pre-arranged time ; he bisects the magnet-cross by the micrometer wire at 45^s, and again at 15^s before that time, also at 15^s and 45^s after that time. The intervals of these four observations are therefore the same as the time of vibration of the magnet, and the mean of all the times is the same as the Greenwich pre-arranged mean time

The mean of each pair of adjacent readings of the micrometer is taken (giving three means), and the mean of these three is adopted as the result. In practice, this is done by adding the first and fourth readings to the double of the second and third, and dividing the sum by 6.

The number of instances in which the magnet was observed in a state of vibration during the year 1862 is very small. Indeed, since the introduction (1842, June 16) of the double box covered with gilt-paper, for inclosing the magnet, instead of the flat drum with glass top furnished by Mr. Meyerstein, it is found that the magnet is seldom in a state of vibration ; and it passes from one position of rest to another, sometimes through a large arc, without vibration. When the magnet is found to be thus free from vibration, two bisections only of the cross are made, one about 15^s before the time recorded, the other about 15^s after that time (30^s being nearly the time of a single vibration).

The adopted result is converted into arc, supposing $1^r = 1'.34''$, and the quantity thus deduced is added to the mean of the vernier-readings, from which is subtracted the constant given in article 9 of the permanent adjustments ; the difference between this number and the adopted reading for the Astronomical South Meridian is taken ; and thus is deduced the magnetic declination, which is used in determining the zero for the photographic register.

§ 3. *Photographic self-registering Apparatus for Continuous Record of Magnetic Declination.*

The general principle adopted for all the photographic instruments is the same. The photographic paper is wrapped round a glass cylinder, and the axis of the cylinder is made parallel to the direction of the movement which is to be registered. The cylinder is turned by clock-work, with uniform velocity. The spot of light (for the magnets and barometer) or the boundary of the line of light (for the thermometers) moves, with the movements which are to be registered, in the direction of the axis of the cylinder, while the cylinder itself is turned round. Consequently, when the paper is unwrapped from its cylindrical form, there is traced upon it (though not visible till the proper chemical agents have been applied) a curve, of which the abscissa measured in the direction of a line surrounding the cylinder is proportional to the time, while the ordinate measured in the direction parallel to the axis of the cylinder is proportional to the movement which is the subject of measure.

In the instruments for registering the motions of the magnets and barometer, a line of abscissæ is actually traced on the paper, by a lamp giving a spot of light in an invariable position, the effect of which on the revolving paper is to trace a line surrounding the cylinder. For the thermometers this is not necessary, as the thermometer-scales are made to carry and to transfer to the photographic paper sufficient indications of the actnal reading of the thermometers.

Every part of the cylinder-apparatus except those on which the spots of light fall is covered with a double case of blackened zinc, having a slit for each moveable spot of light and a hole for the invariable spot; and every part of the path of the photographic light is protected by blackened zinc tubes from the admixture of extraneous light.

In all the instruments, the following method is used for attaching, to the sheet of photographic paper, indications of the time when certain parts of the photographic trace were actually made, and for giving the means of laying down a time-scale applicable to every part of the trace. By means of a small moveable plate, arranged expressly for this purpose, the light which makes the trace can at any moment be completely cut off. An assistant, therefore, occasionally cuts off the light (registering in the proper book the clock-time of doing so), and after a few minutes withdraws the plate (again registering the time). The effect of this is to make a visible interruption in the trace, corresponding to registered times. By drawing lines from these points of interruption parallel to the axis of the cylinder, to meet the photographic line of abscissæ, or an adopted line of abscissæ parallel to it, points are defined upon the line of abscissæ corresponding to registered times. The whole length of the photographic sheet (except where one end, in the cylindrical arrangement, laps over the other) corresponds to the known time of revolution of the cylinder. A scale being prepared

beforehand, whose value for the time of revolution corresponds to the circumference of the cylinder, and the scale-reading for the registered time of interruption of light being applied to the foot of the ordinate corresponding to that interruption, the divisions of hours and minutes may be transferred at once from the scale to the line of abscissæ. In practice it is found that the length of the paper is not always the same, and it is necessary, therefore, to use a scale (a separate one for each separate instrument) which will admit of small expansion and contraction, preserving the proportion of its different parts unaltered. A scale of vulcanized caoutchouc, mounted on a small frame in which one end of the scale is fixed while the other is drawn by a screw, is found to answer extremely well.

One of the revolving cylinders is used for the photographic record of the Declination Magnet and the Horizontal Force Magnet. In the actual positions of these two magnets it was found that the line, drawn from the suspending skein of the declination-magnet to the center of the two suspending lines of the bifilar or horizontal-force-magnet, passed through the internal projection of the south-eastern re-entering angle of the building, but by so small a quantity that I judged it best to plant the apparatus for registry of the two instruments close to that re-entering angle. The first thing to be described is the arrangement of glass cylinders. One glass cylinder with a hemispherical extremity (in all respects similar to those used as shades or protectors of small clocks, works of art, &c.), $11\frac{1}{2}$ inches long in its cylindrical part, and $14\frac{1}{2}$ in circumference, is covered internally with a black pigment, and is stopped at the open end by insertion in a metallic cap, in the center of which is a short spindle and winch-arm. Round this cylinder the photographic paper is wrapped, and the moisture on the photographic paper agglutinates its overlapping ends with sufficient firmness. The cylinder and mounted paper are then covered by another glass cylinder with hemispherical end, whose open end is fixed, by friction, on the rim of the metallic cap to which the inner cylinder is attached, a collar of tape being inserted between. In this state the cylinders are placed in their working-mounting; the short spindle in the cap, and the large cylinder near its hemispherical end, rest upon friction-rollers, the axis of the cylinder being horizontal. The winch-arm is lodged in a fork at the end of the hour-hand of a timepiece, which is made for the purpose, not exceeding in size an ordinary box-chronometer, but with very strong wheels and powerful spring, and with duplex escapement. In order to avoid the ordinary shake of the hour-hand of a clock, due to the play of the motion-wheels under the dial, the hour-hand is placed upon the central axis, and the second wheel, which is usually placed in the center and carries the minute hand, is placed on one side. The cylinder was originally made to turn in twelve hours; but, as this construction sometimes required a change of the photographic sheet every twelve hours, the wheels of the time-piece were changed, to make the cylinder turn in twenty-four hours.

The light, by which the trace of the declination-magnet is made, originates in a

lamp, (formerly of camphine, but, since 1849, of coal-gas charged with the vapour of coal-naphtha) placed slightly out of the direction of a straight line drawn from the suspension-skein of the magnet to the center of the photographic sheet. Before the flame of the lamp is placed a small aperture, about $0^{in}{\cdot}3$ high and $0^{in}{\cdot}01$ broad, independent of the lamp, and supported by a part of the same frame which carries the magnet. The light from the aperture falls upon a concave mirror of speculum-metal, 5 inches in diameter, and about 26 inches from the aperture. This concave mirror is above the top of the box; it is carried by a part of the magnet-carrier, which, although it has a small movement of adjustment relative to the magnet-carrier, is in practice very firmly clamped to it, so that the mirror receives all the angular movements of the magnet. By the concave mirror, the light diverging from the aperture is made to converge to a place nearly on the surface of the cylinder of photographic paper, whose distance from the mirror is about 11·8 feet. The form of the aperture, however, and the astigmatism caused by the inclined reflexion from the mirror, produce this effect, that the image is somewhat elongated in the vertical direction, and is at the same time slightly curved. To diminish the length there is placed near the cylinder a plano-convex cylindrical lens of glass, with its axis horizontal, and the image is thus reduced to a neat spot of light.

The spot of light from the concave mirror of the declination-magnet is received on the south side of the cylinder, near its west end.

Near the east end of the cylinder is placed a gas-lamp, shining by reflexion through a small fixed aperture above the cylinder, from which the light falls upon a small cylindrical lens, by which a very delicate and well-defined photographic trace is marked upon the paper, in a fixed position, intermediate between the photographic curves of the declination and horizontal force magnets. This is the photographic base-line, or line of abscissæ, to which allusion has been made above.

For the declination-magnet, the values, in minutes and seconds of arc, of movements of the photographic spot in the direction of the ordinate, are thus deduced from a geometrical calculation founded on the measures of different parts of the apparatus. The distance of the cylinder from the concave mirror is about 11·8 feet, and a movement of 1° of the mirror produces a movement of 2° in the reflected ray; and the normal to the axis of the cylinder is inclined about 7° to the reflected ray. From this it is found that 1° of movement of the mirror is represented by 4·99 inch upon the photographic paper. A small scale of pasteboard is prepared, whose graduations correspond in value to minutes and seconds so calculated. The zero of the ordinate-scale is found in the following manner. The time-scale having been laid down as is already described, and actual observations of the position of the magnet having been made with the eye and the telescope, (as has been fully described above), at certain registered times, there is no difficulty (by means of these registered times) in defining the points of the photographic trace which correspond to the observed positions.

The pasteboard scale being applied as an ordinate to one of these points, and being slid up and down till the scale-reading which represents the reading actually taken by the eye-observation falls on that point, the reading of the scale where it crosses the line of abscissæ is immediately found. The various readings given by different observations, so long as there is no instrumental change, will scarcely differ, and may be combined in groups, and thus an adopted reading for the line of abscissæ may be obtained. From this, with the assistance of the same pasteboard scale, there will be laid down without difficulty a new line, parallel to that line of abscissæ, whose ordinate would represent some whole number of degrees, or other convenient quantity.

§ 4. *Horizontal-Force-Magnet and Apparatus for observing it.*

The horizontal-force-magnet, furnished by Meyerstein of Göttingen, is, like the declination-magnet, 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. For its support, a wooden tripod-stand is planted in the eastern arm of the Magnetic Observatory, resting immediately on the ground, and not touching the floor. This tripod supports an upright plank, to the top of which a brass frame is attached, carrying two brass pulleys (with their axes in the same east and west line) in front of the plank, and two (in a similar position) at the back of the plank; these constitute the upper suspension-piece. A small windlass is attached to the back of the plank at a convenient height. The magnet-carrier consists of two parts; the upper part is a vertical plate, having a pair of small pulleys attached to it, (whose axes are perpendicular to the plate), and connected below with the torsion-circle; the lower part is the magnet-stirrup, turning by stiff friction in the torsion-circle, and bearing a pointer above for reading its graduations, and bearing also a small plane mirror below, to which a fixed telescope is directed for observing by reflexion the graduations of a fixed scale (to be mentioned shortly). Under the two small pulleys of the vertical plate passes a skein of silk; its two branches rise up and pass over the front pulleys of the suspension-piece, then over its back-pulleys, and then descend and pass under a single large pulley, whose axis is attached to a string that passes down to the windlass. Supported by the two branches of the skein, the magnet swings freely, but the direction that it takes will depend on the angular position of its stirrup with respect to the vertical plate; it is intended that the index should be brought to such a position on the torsion-circle that the two suspending branches should not hang in one plane, but should be so twisted that their torsion-force will maintain the magnet in a direction very nearly E. and W. magnetic (its marked end being W.), in which state an increase of the earth's magnetic force draws the marked end towards the N., till the torsion resistance is sufficiently increased to resist it, or a diminution allows the torsion-force to draw it towards the S. The magnet, with its plane mirror, hangs within a double rectangular box (one box completely inclosed within another) covered with gilt paper, similar to that used for the declination-magnet; in its S. side there is one hole, covered

with glass, through which the rays of light from the scale enter to fall on the plane mirror, and another hole, similarly covered, through which the rays reflected by the mirror pass to the fixed telescope. The vertical rod, (below the pointer for indications of torsion-circle), which carries the magnet-stirrup, passes through a hole in the top of the box. The height of the brass pulleys of the suspension-piece above the floor is $11^{ft.}\ 5^{in.}$; that of the pulleys of the magnet-carrier is $3^{ft.}\ 8^{in.}$; and that of the center of the plane mirror is about $2^{ft.}\ 11^{in.}$ The distance between the branches of the silk skein, where they pass over the upper pulleys, is $1^{in.}\cdot 48$; at the lower part the distance between them is $0^{in.}\cdot 92$.

An oval copper bar embraces the magnet (exactly similar to that for the declination-magnet), for the purpose of diminishing its vibrations.

The scale, which is observed by means of the plane mirror, is fixed to the South wall of the East arm of the magnetic observatory. The numbers of the scale increase from East to West, so that, when the magnet is inserted in the magnet-cell with its marked end towards the West, increasing readings of the scale (as seen with a fixed telescope directed to the mirror which the magnet carries) denote an increasing horizontal force. A normal from the magnet-mirror to the scale meets it at the division 40 nearly.

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor without touching it, and are firmly connected with piles driven into the ground. Its position is such that an observer, sitting in a chair at a convenient place for observing the declination-magnet with the theodolite, can, by turning his head, look into the telescope which is directed to the mirror of this instrument. The angle between the normal to the scale (which usually coincides nearly with the normal to the axis of the magnet) and the axis of the telescope, is about 54°, and the plane of the mirror is therefore inclined to the axis of the magnet about 27°.

On 1847 August 21, the magnet-carrier for the photographic apparatus was mounted. It differs from that just described only in this respect, that the vertical plate with the two small pulleys is sufficiently raised to permit the descending rod to carry, between the torsion-circle and the top of the box, a concave mirror 4 inches in diameter. The form of this suspension is so exactly similar to that for the declination-magnet (the sole differences being that the mirror is 4 inches in diameter, and that the suspending skein passes under two pulleys, as above described), that it is unnecessary here to give any further description of it.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE HORIZONTAL-FORCE-MAGNET.

1. Determination of the times of vibration and of the different readings of the scale for different readings of the torsion-circle, and the reading of the torsion-circle and the time of vibration when the magnet is transverse to the magnetic meridian.

To render the process intelligible, it may be convenient to premise the following explanation.

Suppose that the magnet is suspended in its stirrup which is firmly connected with the small plane mirror, with its marked end in a magnetic westerly direction (not exactly W., but in any westerly direction between N. and S.), and suppose that, by means of the telescope directed towards that mirror, the scale is read, or (which is the same thing) the position of the plane mirror and of the stirrup, and therefore that of the axis of the magnet, are defined. Now let the magnet be taken out of the stirrup and replaced with its marked end easterly. The terrestrial magnetic power will now act, as regards torsion, in the direction opposite to that in which it acted before, and therefore the magnet will not take the same position as before. But by turning the torsion-circle, which changes the amount and direction of the torsion-power produced by the oblique tension of the suspending cords, the magnet may be made to take the same position as before (which will be proved by the reading of the scale, as viewed in the plane mirror, being the same as before). The reading of the torsion-circle will be different from what it was before. The effect of this operation then is, to give us the difference of torsion-circle-readings for the same position of the magnet-axis with the marked end opposite ways, but it gives no information as to whether the magnet-axis is transverse to the meridian, inasmuch as the same operation can be performed whether the magnet-axis is transverse or not.

But there is another observation which will inform us whether the magnet-axis is or is not transverse. Let the time of vibration be taken in each position of the magnet. Resolve the terrestrial magnetic force acting on the poles of the magnet into two parts, one transverse to the magnet, the other longitudinal. In the two positions of the magnet (marked end westerly and marked end easterly, with axis in the same position), the magnitude of the transversal force is the same, and the changes which the torsion undergoes in a vibration of given extent are the same, and the time of vibration if there were no other force would be the same. But there is another force, namely the longitudinal force; and when the marked end is northerly, this tends from the center of the magnet's length, and when it is southerly it tends towards the center of the magnet's length; and in a vibration of given extent this produces force, in one case increasing that from the torsion and in the other case diminishing it. The times of vibration therefore will be different. There is only one exception to this, which is, when the magnet-axis is transverse to the magnetic meridian, in which case the longitudinal force vanishes.

The criterion then of the position truly transverse to the meridian (which position is necessary in order that the indications of our instrument may apply truly to changes of the magnitude of terrestrial magnetic force without regard to changes of direction) is this. Find the readings of the torsion-circle which, with magnet in reversed positions, will give the same readings of the scale as viewed by reflexion in the plane mirror, and will also give the same time of vibration for the magnet. With these readings of the torsion-

circle the magnet is transverse to the meridian; and the difference of the readings of the torsion-circle is the difference between the position, when terrestrial magnetism acting on the magnet twists it one way, and the position when the same force twists it the opposite way, and is therefore double the angle due to the torsion-force of the suspending lines when they neutralize the force of terrestrial magnetism.

The following table exhibits the elements of one of the determinations made in 1862:—

1862. Day.	The Marked end of the Magnet. West. Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.	East. Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.
	°	div.	div.	s	°	div.	div.	s
January 6					227	13·43	8·83	21·12
	139	23·11	9·91	21·94	228	22·26	9·04	21·22
	140	33·02	9·47	21·70	229	31·30	8·69	21·34
	141	42·49	8·31	21·74	230	39·99	8·18	21·50
	142	50·80	10·29	21·38	231	48·17	9·36	21·62
	143	61·09	7·72	21·73	232	57·53	10·00	21·82
	144	68·81	8·92	21·65	233	67·53	10·13	21·94
	145	77·73	8·99	21·60	234	77·66	9·03	22·08
	146	86·72		21·61	235	86·69		22·28

Regarding the number 21·38 in the fifth column as probably affected with some error, it appears that, when the scale reading was 50·80, the times of vibration were sensibly equal in the two positions of the magnet, and the torsion-circle-readings were respectively 142° and 231°. 17′, differing 89°. 17′. Half this difference, or 44°. 38′. 30″, is the angle of torsion when the magnet is transverse to the meridian.

The mean of several determinations gave 44°. 37′. 30″. The reading adopted for the torsion-circle, marked end of magnet West, was 142°. 30′ to April 29, and 142°. 0′ from April 30 to the end of the year.

3. Determination of the compound effect of the vertical-force-magnet and the declination-magnet on the horizontal-force-magnet, when suspended with its marked end towards the West.

The details of the experiments, made while the old vertical-force-magnet was in use, will be found in the volumes for 1841, 1842, 1843, 1844, 1845. The effect was to increase the readings by $0^{div}\cdot487$. On mounting a new vertical-force-magnet in 1848, similar experiments were made, and the resulting number was $0^{div}\cdot45$. These quantities are totally unimportant, in their influence on the registers of changes of horizontal force.

4. Computation of the angle corresponding to one division of the scale, and of the variation of the horizontal force (in terms of the whole horizontal force) which moves the magnet through a space corresponding to one division of the scale.

It was found by accurate measurements, at the end of the year 1840, that the distance from $40^{div.}$ on the scale to the center of the face of the plane mirror is $8^{ft.}\ 5^{in.}\cdot1$, and that the length of $30^{div.}\cdot9$ of the scale is exactly 12 inches; consequently, the angle at the mirror subtended by one division of the scale is $13'.\ 12''\cdot32$, or, for one division of the scale, the magnet is turned through an arc of $6'.\ 36''\cdot16$.

The adopted angle of torsion as mentioned above is $44°.\ 37'.\ 30''$; consequently the variation of horizontal force (in terms of the whole horizontal force) for a disturbance through one division of the scale, computed by the formula, "Cotan. angle of torsion $\times$ value of one division in terms of radius," is 0·001946. This number has been used throughout the year 1862.

5. Determination of the correction for the effect of temperature on the horizontal force magnet.

In the Introduction to the volume of Magnetical and Meteorological Observations for 1847 will be found a detailed account of observations made in the years 1846 and 1847 for determination of this element. The principle adopted was that of observing the deflection which the magnet (to be tried) produces on another magnet; the magnet (to be tried) being carried by the same frame which carries the telescope that is directed to the plane mirror attached to the other magnet, and which also carries the scale that is viewed by reflection in that plane mirror. The rotation of the frame was measured by a graduated circle about 23 inches in diameter. The magnet (to be tried) was always on the eastern side of the other magnet. It was enclosed in a copper trough, which was filled with water at different temperatures. One end of the magnet (to be tried) was directed towards the other magnet. The values found for correction of the results as to horizontal force found with the magnet at temperature $t°$, in order to reduce them to what they would have been if the temperature of the magnet had been 32°, expressed as multiples of the whole horizontal force, were,*

When the marked end of the magnet (to be tried) was West,

$$0\cdot00007137\ (t-32°) + 0\cdot000000898\ (t-32°)^2$$

When the marked end of the magnet (to be tried) was East,

$$0\cdot00009050\ (t-32°) + 0\cdot000000626\ (t-32°)^2$$

The mean, or

$$0\cdot00008093\ (t-32°) + 0\cdot000000762\ (t-32°)^2$$

has been embodied in tables which have been used in the computation of the "Reduction of Magnetic Observations 1848–1857," attached to the Volume of Observations

* By inadvertence in printing the Introduction 1847, the letter t has been used in two different senses.

1859, and in the computation for "Days of Great Magnetic Disturbance 1841–1857" attached to the present volume.

This may be a convenient place for stating that observations made in the present year (1864), in which the magnet has been heated by hot air instead of hot water, give a much larger value to the principal coefficient.

The method of observing with the horizontal-force-magnet is the following :—

A fine vertical wire is fixed in the field of view of the telescope, which is directed to the plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed scale are seen ; and during the oscillations of the magnet, the divisions of the scale are seen to pass alternately right and left across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the observation of declination. The first observation is made by the observer applying his eye to the telescope 40^s before that time, and, if the magnet is in a state of vibration, he observes the next four extreme points of vibration of the scale, and the mean of these is adopted in the same manner as for the declination-observations ; but if it is at rest, then at 10^s before the pre-arranged time, he notes the division of the scale bisected by the wire ; and 20^s afterwards he notes whether the same division continues bisected, and if it does, that reading is adopted as the result.

The number of instances when the magnet was observed in a state of vibration during the year 1862 is very small.

Within the double box is suspended a thermometer, which is read at every hour of observation. On one day also of every week, the readings of the thermometer are taken at 18^h, 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, 6^h, 9^h, and 12^h.

§ 5. *Photographic self-registering Apparatus for Continuous Record of Magnetic Horizontal Force.*

Much of the description of the photographic apparatus attached to the declination-magnet applies also to that which is attached to the horizontal-force-magnet. A concave mirror of speculum-metal, 4 inches in diameter, is carried by the magnet-carrier. The light of a lamp of naphthalized gas shines through a small aperture $0^{in}{\cdot}3$ high, and $0^{in}{\cdot}01$ broad (which is supported by the magnet-stand), at the distance of about 22 inches from the concave mirror, and is made to converge to a point on the north surface, and near the east end of the same revolving cylinder which receives the light from the concave mirror of the declination-magnet. A cylindrical lens parallel to the axis of the cylinder receives the somewhat elongated image of the source of light, and converts it into a well-defined spot. The motions of this spot parallel to the axis represent the angular movements of the magnet which are produced, by an increase of terrestrial magnetic force overcoming more completely the torsion-force of the bifilar suspension, or by a diminution of terrestrial force yielding to the torsion-force.

As the spot of light from the horizontal-force-mirror falls on the side of the cylinder opposite to that on which the light from the declination-mirror falls, the same time-scale will not apply to both; it is necessary to prepare a time-scale independently for each.

The following is the calculation by which the scale of horizontal force on the photographic sheet is determined. The distance between the surface of the concave mirror and the surface of the cylinder is 127·65 inches; consequently, one degree of angular motion of the magnet, producing two degrees of angular motion of the reflected ray, moves the spot of light through 4·4892 inches. Now the variation of horizontal force (in terms of the whole horizontal force) corresponding to one degree of angular motion of the magnet = sin 1° × cotan 44°. 37′. 30″ = 0·017682 nearly. From these numbers it is immediately found that a movement of the spot of light through 0·25388 inch corresponds to a variation of horizontal force expressed by 0·001. With this fundamental number the pasteboard scale for measure of horizontal force has been prepared.

§ 6. *Vertical-Force-Magnet, and Apparatus for observing it.*

The vertical-force-magnet, like the other two magnets, is 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. The magnet in use to 1848 was made by Robinson; that in use from 1848 to the present time (1864) was by an unknown maker. Its supporting frame rests upon a block, connected with a tripod-stand which passes through the floor and rests immediately on the ground in the western arm of the Magnetic Observatory. Its position is as nearly as possible symmetrical with that of the horizontal-force-magnet in the eastern arm. Upon the block is fixed the supporting frame, consisting of two pillars (connected at their bases) on whose tops are the agate planes upon which vibrate the knife-edges (to be mentioned immediately). The carrier of the magnet is a brass frame, to which are attached by clamps and pinching-screws two steel knife-edges, each about $\frac{1}{2}$ inch long. In the frame first erected, the length of axis of vibration, from end to end of the knife-edges, was $2\frac{1}{2}$ inches; in the frame adapted to the photographic apparatus, and in use from 1848 to 1863, the length from end to end of the knife-edges is 7 inches. The axis of the magnet is as nearly as possible transverse to the meridian, its marked end being E. The axis of vibration is as nearly as possible N. and S. To the southern end of the brass frame, and projecting further south than the end of the knife-edge, is fixed a small plane mirror, whose plane makes with the axis of the magnet an angle of 54° nearly. The fixed telescope (to be mentioned) is directed to this mirror, and by reflexion at the surface of the mirror it views a vertical scale (to be mentioned shortly). The height of this mirror above the floor is about $2^{ft.}\ 11^{in.}$. Before the introduction of the photographic methods, the magnet was placed in a perforation of the brass frame midway between its knife-edges. But since the photographic method was introduced, the

magnet has been placed excentrically; the distance of its southern face from the nearest end of the southern knife-edge being only $\frac{1}{2}$ inch, and a space of $4\frac{1}{2}$ inches in the northern part of the brass frame being left disposable. In this disposable space there is attached to the brass frame by three clips a concave mirror of speculum-metal, 4 inches in diameter, with its face at right angles to the length of the magnet, used in the photographic system (shortly to be described). Near the north end of the brass frame are fixed in it two screw-stalks, upon which are adjustible screw-weights; one stalk is horizontal, and the movement of its weight affects the position of equilibrium of the magnet (which depends on the equilibrium between the moments of the vertical force of terrestrial magnetism on the one hand and of the magnet's center of gravity on the other hand); the other stalk is vertical, and the movement of its weight affects the delicacy of the balance, and varies the magnitude of its change of position produced by a change in the vertical force of terrestrial magnetism.

The whole is inclosed in a double rectangular box covered with gilt paper, similar to those used for the declination-magnet and the horizontal-force-magnet. This box is based upon the block of wood above mentioned; and in it, in a space separated from the rest by a thin partition, the magnet can vibrate freely in the vertical plane. In the south side of the box is a hole covered by glass, through which pass the rays of light from the scale to the plane mirror, and through which they are reflected from the plane mirror to the telescope. And at the east end is a large hole covered by glass, through which passes the light from the lamp to the concave mirror, and through which it is reflected to the photographic cylinder (to be described hereafter).

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor without touching it, and are firmly connected with piles driven into the ground. Its position is symmetrical with that of the telescope by which the horizontal-force-magnet is observed; so that a person seated in a position proper for observing the declination-magnet can, by an easy motion of the head right and left, observe the vertical-force and horizontal-force-magnets.

The scale is vertical: it is fixed to the stand which carries the telescope, and is at a very small distance from the object-glass of the telescope. The wire in the field of view of the telescope is horizontal. The telescope being directed towards the mirror, the observer sees in it the divisions of the scale passing upwards and downwards over the fixed wire as the magnet vibrates. The numbers of the scale increase from top to bottom; so that, when the magnet is placed with its marked end towards the East, increasing readings (as seen with the fixed telescope) denote an increasing vertical force.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE VERTICAL-FORCE-MAGNET.

1. Determination of the compound effect of the declination-magnet, the horizontal-force-magnet, and the iron affixed to the electrometer pole, on the vertical-force-magnet.

The experiments applying to the magnets are given in the volumes for 1840–1841 to 1845: and those applying to the electrometer pole in the volume for 1842. It appears that no sensible disturbance is produced.

2. Determination of the time of vibration of the vertical-force-magnet in the vertical plane.

In the year 1862, vibrations of the vertical-force-magnet were observed on 73 different days, and with readings of various divisions of the scale. The times of vibration were so accordant as to leave no reason for dividing the results into separate groups. The mean of all was $15^{s}\cdot38$.

3. Determination of the time of vibration of the vertical-force-magnet in the horizontal plane.

1859, April 19. The magnet with all its apparatus was suspended from a tripod in the Library, its broad side being in a plane parallel to the horizon; therefore, its moment of inertia was the same as when it is in observation. A telescope, with a wire in its focus, was directed to the reflector carried by the magnet. A scale of numbers was placed on the floor of the Library, at right angles to the long axis of the magnet, or parallel to the mirror. The magnet was observed only at times when it was swinging through a small arc.

From 700 vibrations, the mean time of one vibration $= 24^{s}\cdot258$.

4. Computation of the angle through which the magnet moves for a change of one division of the scale; and calculation of the disturbing force producing a movement through one division, in terms of the whole vertical force.

The distance from the scale to the mirror is 151·2 inches, and each division of the scale $= \frac{12}{30\cdot9}$ inches. Hence the angle which one division subtends, as seen from the mirror, is $8'.\ 49''\cdot79$; and therefore the angular movement of the normal to the mirror, corresponding to a change of one division of the scale, is half this quantity, or $4'.\ 24''\cdot90$.

But the angular movement of the normal to the mirror is not the same as the angular movement of the magnet; but is less, in the proportion of unity to the cosine of the angle which the normal to the mirror makes with the magnet, or in the proportion of unity to the sine of the angle which the plane of the mirror makes with the magnet. This angle has been found to be 54°: therefore, dividing the result just obtained by sine 54°, we have, for the angular motion of the magnet corresponding to a change of one division of the scale, $5'.\ 27''\cdot43$.

From this, the value, in terms of the whole vertical force, of the disturbing force producing a change of one division, is to be computed by the formula, "Value of

Division in terms of radius × cotan. dip × $\frac{T'^2}{T^2}$," where T′ is the time of vibration in the horizontal plane, and T the time of vibration in the vertical plane.

The dip has been assumed to be 68° 10′ throughout the year.

Throughout the year 1847, T′ was assumed = $24^{s}\cdot258$, T = $15^{s}\cdot38$; consequently, the change of vertical force (in terms of the whole vertical force) corresponding to a change of one division of the scale, was 0·0015821; and this number has been used in the reduction of the observations.

5. Investigation of the temperature-correction of the vertical-force-magnet.

In the Introduction to the Magnetical and Meteorological Observations for 1847 are given the details of observations for the effect of temperature on the vertical-force-magnet, made in the same way as those for the horizontal-force-magnet described above. The results for the thermometrical correction at temperature $t°$ of Fahrenheit, in terms of the whole vertical force, are—

With marked end of magnet West—

$$0\cdot00012652 \times (t-32) + 0\cdot000001619 \times (t-32)^2;$$

and with marked end East—

$$0\cdot00018979 \times (t-32) + 0\cdot000000726 \times (t-32)^2;$$

the mean being—

$$0\cdot00015816 \times (t-32) + 0\cdot000001172 \times (t-32)^2.$$

A table of the last quantity has been formed, and has been used in the "Reduction of the Observations from 1848 to 1857," attached to the Observations for 1859, and in the "Reductions on days of Great Magnetic Disturbance," attached to the present volume.

It is proper to state that observations made in the present year (1864), on the change of magnetic power produced when the magnet is heated by hot air, give a much larger value to the principal coefficient of the formula.

The method of observing with the vertical-force-magnet is the following:—

A fine horizontal wire is fixed in the field of view of the telescope, which is directed to the small plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed vertical scale are seen; and, during the oscillations of the magnet, the divisions of the scale are seen to pass alternately upwards and downwards across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the other two magnets. The observer applies his eye to the telescope about two vibrations before the arranged time, and if the magnet is in motion he observes its places at four extreme vibrations; and the mean of these is taken as for the horizontal-force-magnet. But if the magnet is at rest, then at one-half time of

vibration before the arranged time, and at an equal interval after the arranged time, the division of the scale is noted; if there is a slight difference, the mean is taken.

The number of instances in 1862 in which the magnet was found in a state of vibration is very small.

Within the double box is suspended a thermometer, which is read at every hour of observation, and also, on one day of every week, at the hours 18^h, 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, 6^h, 9^h, and 12^h, in the same manner as that of the horizontal-force-instrument.

§ 7. *Photographic self-registering Apparatus for Continuous Record of Magnetic Vertical Force.*

The concave mirror which is carried by the vertical-force-magnet has been described in the last article. At the distance of about 22 inches from that mirror, and external to the box, is the horizontal aperture, about $0^{in}{\cdot}3$ in length and $0^{in}{\cdot}01$ in breadth, carried by the same block which carries the supports of the agate plates. The lamp which shines through this aperture was originally carried by the same block; but the numerous disturbances shown in the photographic trace at the times of changing the lamp suggested the propriety of supporting it upon a different foundation; and since 1849, February, it has been carried by another wooden pier, of such a form as to admit of the lamp being placed very nearly in contact with the aperture-plate. The light reflected from the mirror passes through a cylindrical lens with its axis vertical, very near to the cylinder carrying the photographic paper, and finally forms a well-defined spot of light on the cylinder of paper, at the distance of 8·3 feet from the mirror. As the movements of the magnet are vertical, the axis of the cylinder is vertical. The cylinder is about $15\frac{1}{2}$ inches in circumference, or somewhat larger than that used for the declination and horizontal-force magnets. The forms of the exterior and interior cylinders, and the method of mounting the paper, are in all respects the same as for the declination and horizontal-force magnets; but the cylinder is supported by being merely planted upon a circular horizontal plate (its position being defined by fitting a central hole in the metallic cap of the cylinder upon a central pin in the plate), which is turned by watchwork once in twenty-four hours. The trace of the vertical-force-magnet is on the west side of the cylinder.

On the east side, the cylinder receives the trace produced by the barometer (to be described hereafter). A pencil of light from the lamp which is used for the barometer shines through a fixed aperture with a small cylindrical lens, for tracing a photographic base-line upon the cylinder of paper, similar to that for the cylinder of the declination and horizontal-force magnets.

The scale for the ordinates of the photographic curve of the vertical force is thus computed. Remarking that the radius which determines the range of the motion of the spot of light is double the distance 8·3 feet, and is therefore = 199·2 inches, the

formula used in the last section, when applied to $\frac{\text{disturbing force}}{\text{whole vertical force}} = 0{\cdot}01$, becomes $0{\cdot}01 = \frac{\text{value of division}}{199{\cdot}2} \times \text{cotan } 68^\circ.\ 10' \times \left(\frac{24{\cdot}258}{15{\cdot}38}\right)^2$, or value of division $= 199{\cdot}2 \times \tan 68^\circ.\ 10' \times \left(\frac{15{\cdot}38}{24{\cdot}258}\right)^2 \times 0{\cdot}01 = 2$ inches very nearly. With this value for 0·01, the pasteboard scales have been prepared.

§ 8. *Dipping Needles, and Method of observing the Magnetic Dip.*

The instrument with which all the observations of the Dip were made from 1843 to 1861, October 9, was constructed by Robinson, and it is one of the last instruments completed by that artist before his death.

The inner diameter of the vertical circle is 9·59 inches, and the circle is divided to ten minutes; so that every two divisions are $0^{in}{\cdot}014$ apart at their inner extremities. The divisions appear to be sensibly perfect.

The diameter of the horizontal circle, measured between the points where the extremity of the index meets the graduations, is 5·43 inches. The graduation is to half degrees, and the vernier subdivides to single minutes. There is only one reading.

The vertical circle is graduated upwards and downwards to 90° from the two extremities of the horizontal diameter. The horizontal circle is graduated from 0° to 180°, and then from 0° to 180° again in the same direction; so that had the circle been divided from 0° to 360° (a more natural and convenient method), the readings 180° to 360° would have occupied the part of the circle now occupied by the second set of divisions.

The instrument was furnished by Robinson with two needles marked at one end A 1 and A 2 respectively.

The length of A 1 is 9·56 inches.
The length of A 2 is 9·55 inches.

The lengths of the needles, therefore, are respectively only $0^{in}{\cdot}03$ and $0^{in}{\cdot}04$ less than the inner diameter of the circle.

The needles usually swing quite round the circle without touching, proving that the circle is nearly perfect, and that the upper surfaces of the agate planes on which the cylindrical terminations of the axle rest, are so placed as to be below the centre of the vertical circle by a distance equal to half the thickness of the axle at its bearing points.

The surfaces of the agate planes are $1^{in}{\cdot}09$ apart; the whole length of each of the axles of the needles is $1^{in}{\cdot}20$, of which a length $0^{in}{\cdot}88$ is nearly $0^{in}{\cdot}1$ in diameter; a portion, $0^{in}{\cdot}02$ in length on each side, is of less thickness, and this part of each rests in the Y's when the needle is raised from the agate planes; the remainder, $0^{in}{\cdot}14$ on each side, is the cylindrical termination of the axles, and its diameter is about $0^{in}{\cdot}02$:

both needles are of the same dimensions in these respects, and no certain difference exists in the diameters of their axles.

The instrument was subsequently furnished by Barrow and Dent with other needles of the same dimensions.

The coincidents of planes of the two agates, and the general accuracy of their surfaces, have been occasionally examined by placing on them, sometimes the plane glass of an artificial horizon, and sometimes a small level in different positions; and no reason has been found for doubting the perfect accuracy of the workmanship.

The observations were made in a house built for the purpose entirely of wood, with copper and brass fastenings, at a distance of 64 feet S.S.E. from the nearest part of the Magnetic Observatory. This house was taken down in 1863.

The observations of the Dip were made as follows:—

The horizontal circle is levelled, so that the bubble keeps the same position in all positions of the vertical circle. For ascertaining the reading of the horizontal circle when the vertical circle is nearly in the plane of the magnetic meridian, an instrument is occasionally inserted, consisting of a small steel point above, a brass steadying weight below, and two brass arms by means of which this instrument rests upon the Y's; upon the steel point a free horizontal magnet is mounted with an inverted agate cup in the usual manner; and the whole apparatus is turned till the plane of the vertical circle passes through the free needle. This method has several times been combined with that of corresponding inclinations in two positions of the vertical circle nearly perpendicular to the magnetic meridian: and also with that of turning the instrument on its axis until the dipping needle has assumed a vertical position, and inferring the reading for meridional position of the vertical circle by applying 90° to the reading corresponding to this position: the differences have been always found of small amount.

The needle is then placed on the Y supports, and lowered gradually on to the agate planes, with its marked side on the same side with the divided circle, both being towards the east, and the divisions of the vertical circle at the two ends of the needle are read. The instrument is then turned 180° in azimuth, and the observation is repeated, the marked side of the needle and the graduated face of the instrument being towards the west. The needle is then reversed on its axle so that its face is to the east, the face of the instrument being still towards the west, and similar observations are made. The instrument is then turned 180° in azimuth, so that its graduated face is towards the east, and the marked side of the needle towards the west, and the observations are repeated. To eliminate the effect of the want of coincidence of the center of gravity of the needle with the axis of rotation, the poles of the needle are then reversed by means of about 20 double strokes of two 9-inch bar magnets on each side of the centre of the needle; it is assumed that it is completely saturated by this means; and then step by step the observation is made as before.

In each position of the needle the axle is raised off the agate planes, lowered, and the readings taken again; and this is repeated two, three, or four times, according to the degree of uncertainty, and the mean of all is adopted.

The resulting dip is that corresponding to the mean of the eight observed results.

With the view of ascertaining whether partial results obtained on one day could be combined with other partial results obtained on other days, and also whether a needle left at rest would show the diurnal changes, the needle A 1 was left for some time in 1843 on the agate planes, and observations were made at short intervals, which appear in the volume for 1843. From those observations it appeared that partial observations on one day cannot be safely combined with other partial observations taken on another day, nor can the diurnal change be shown by reading the needle repeatedly on the same day without touching it.

For the immediate results of the observation of Dips with this instrument, I must refer to the printed *Observations* from 1843 to 1861. The results were not so harmonious as the traditions of less experienced observers might lead us to expect. Generally it was found that, with the needles (so far as is known) in the highest state of perfection, the accordance between observations in immediate succession, separated only by a careful raising and lowering of the needle, differed considerably, sometimes as much as 30′, although the freedom of vibration proved that there was no impediment to motion. On repeatedly performing this operation, different results were obtained; and any predisposition in the mind of the observer, to prefer a reading harmonizing with the readings of other days, might easily be gratified by the selection of one of those readings. The utmost care was taken to banish such predisposition; and it is believed that every printed reading is perfectly unbiassed. In classifying these, it appeared to be well established that some needles, in which the most careful scrutiny can discover no fault, give a dip (as found from the mean of all taken in one year) steadily differing from those of other needles.

With the view of removing all causes of possible error of observation which we can fully understand and control, I furnished Mr. Simms with plans for a new instrument, which, for distinction, is subsequently called Airy's instrument. The following description will probably suffice to convey an idea of its peculiarities:—

The form of the needles, the form of their axes, the form of the agate bearings, and the general arrangement of the relieving apparatus, are precisely the same as those in Robinson's and other needles. But the form of the observing apparatus is greatly modified, in order to secure the following objects:—

I. To obtain a microscopic view of the points of the needles, as in the instruments introduced by Dr. Lloyd and Major-General Sabine.

II. To possess at the same time the means of observing the needles while in a state of vibration.

III. To have the means of observing needles of different lengths.

IV. To give an illumination to the field of view of each microscope, directed from the side opposite to the observer's eye, so that the light may enter past the point of the needle into the object glass of the microscope, forming a black image of the needle-point in a bright field of view.

V. To give facility for observing by day or night.

With these views, the following form is given to the apparatus :—

The needle, and the bodies of the microscopes, are inclosed in a square box. The base of the box, two vertical sides, and the top, are made of gun-metal (carefully selected to insure its freedom from iron); but the sides parallel to the plane of vibration of the needle are of glass. Of the two glass sides, that which is next the observer is firmly fixed; it is hereafter called "the graduated glass-plate." The other glass side can be withdrawn, to open the box, for inserting the needle, &c.

An axis, whose length is perpendicular to the plane of vibration of the needles, and is as nearly as possible in the line of the axis of the needle, supported on two bearings (of which one is cemented in a hole in the graduated glass-plate, the other being upon a horizontal bar near to the agate support of the needle-axis), carries a transverse arm, about 11 inches long, or rather two arms, projecting about $5\frac{1}{2}$ inches on each side of the axis. Each of these projecting arms has a long opening, or slot, about 1 inch wide, extending from the neighbourhood of the center-work nearly to the end of the arm. Through this opening the tube of a microscope passes, in a direction parallel to the axis of the needle, and is firmly fixed by a shoulder-bearing on one side of the arm, and a circular nut, working in a thread cut upon the microscope-tube, on the other side of the arm. The microscope can thus be fixed at any distance from the central axis, within the limits of the length of the projecting arm. In 1863, the slot for a single moveable microscope on each side was changed for three fixed microscopes on each side, adapted in position to the lengths of the needles to be mentioned shortly.

The microscope-tube thus carried is not the entire microscope, but so much as contains the object-glass and the field-glass. Upon the plane side of the field-glass (which is turned towards the object-glass), a series of parallel lines is engraved by etching with fluoric acid. The object-glass is so adjusted that the image of the needle-point is formed upon the plane side of the field-glass; and thus the parallel lines can be used for observing the needle in a state of vibration; and, one of them being adopted as standard, the lines can be used for reference to the graduated circle (to be mentioned). All this requires that there be an eye-glass also for the microscope.

The axis of which we have spoken is continued through the graduated glass-plate, and there it carries another transverse arm parallel to the former, and generally similar to it. In each part of this slides a short eye-piece, carrying the eye-glass. In 1863, the slotted arm and moveable eye-socket were changed for an arm with three sockets. Thus, reckoning from the observer's eye there are the following parts:—

(1.) The eye-glass.

(2.) The graduated glass-plate (its graduations, however, not intervening in this part of the glass, the graduated circle being so large as to include all the microscopes).

(3.) The field-glass, on the further surface of which the parallel lines are engraved.

(4.) The object-glass.

(5.) The needle.

(6.) The removeable glass side of the box.

(7.) The illuminating reflector, to be described hereafter.

The optical part of the apparatus being thus described, we may proceed to speak to the graduated circle.

The graduations of the circle (whose diameter is about $9\frac{3}{4}$ inches) are etched on the inner surface of the graduated glass-plate. These divisions (as well as the parallel lines on the field glasses of the microscopes) are beautifully neat and regular, and are, I think, superior to any that I have seen on metal. The same piece of metal which carries the transverse arms supporting the microscope-bodies carries also two arms with verniers for reading their graduations. These verniers (being adapted to transmitted light) are thin plates of metal, with notches instead of lines. The reading of the verniers is very easy. The portion of the axis which is external to the graduated glass-plate (towards the observer), and which has there, as already stated, two arms for carrying the microscope eye-glasses, has also two arms for carrying the lenses by which the verniers and glass-plate graduations are viewed. These four arms are the radii of a circle, which can be fixed in position by a clamp, attached to the gun-metal casing of the graduated glass-plate, and furnished with the usual slow-motion screw.

The entire system of the two arms carrying the microscope-bodies, the two arms carrying the microscope eye-glasses, the two arms carrying the verniers, and the two arms carrying the reading-glasses for the verniers, is turned rapidly by means of a button on the external side of the graduated glass-plate, or is moved slowly by means of the slow-motion screw just mentioned.

It now remains only to describe the illuminating apparatus. On the outside of the removeable glass plate, there are supports for the axis of a metallic circle turning in a plane parallel to the plane of needle-vibration. This circle has four slotted radii, and in these slots or openings there slide small frames carrying prismatic glass reflectors, each of which can turn on an axis, in the plane of the circle, but transverse to the radius. Two of these reflectors are for the purpose of sending light through the verniers, and therefore are fixed in radial distance; the other two are for sending light past the ends of the needle through the microscopes, and therefore require adjustment on change of needle and corresponding change of position of microscopes. These have now been changed for fixed reflectors, corresponding to the fixed microscopes. The circle can be turned by a small winch near the observer's hand. At present, the winch is removed, as its axis was found to be slightly magnetic. At each observation, it is necessary to turn the circle which carries the reflectors; but this is the work of an instant.

The light which illuminates the whole is a gas-burner, in the line of the axis of

rotation. Its rays fall upon the glass prisms, and each of these is adjusted, by turning on its axis, to throw the reflected light in the required direction.

The whole of the apparatus, as thus described, is planted upon a horizontal plate admitting of rotation in azimuth: the plate is graduated in azimuth, and verniers are fixed to the gun-metal tripod stand. The gas-pipe is led down the central vertical axis, and there communicates by a rotatory joint with the fixed gas-pipes.

The needles which are used with this instrument are—

B_1, a plain needle	each 9 inches long.
B_2, a plain needle	
B_3, a loaded needle with adjustible load	
C_1, a plain needle	each 6 inches long.
C_2, a plain needle	
C_3, a loaded needle with adjustible load	
D_1, a plain needle	each 3 inches long.
D_2, a plain needle	
D_3, a loaded needle with adjustible load	

It is believed that the results of the observations with this instrument are somewhat, but not very greatly, more consistent than those with the old instrument. The advantage gained appears to arise from the greater certainty of readings of graduations, and from the greater facility of repeating observations whose means are adopted for use.

As the unsteadiness of result in successive observations still remains, suggesting the idea that the magnetic axis wanders in the breadth of the needle, three needles have been constructed (B_4, C_4, D_4, 9, 6, and 3 inches long), whose plane passes through the axis of the needle. It is believed that the results with this form of needle are more consistent than those with the customary form.

§ 9. *Observations for the Absolute Measure of the Horizontal Force of Terrestrial Magnetism.*

The apparatus with which these observations were made from 1845 to 1862, February, is the same which was used in the investigation of corrections of horizontal-force-magnet and vertical-force-magnet for temperature. A wooden frame, with four horizontal arms which travel with an azimuthal revolution by rollers upon a wooden framed ring, carries at its center an erection to which the magnet (the subject of deflexion) is suspended by a few fibres of silk; and carries, at the extremity of one of the horizontal arms, a telescope, and also a graduated scale, which is viewed with the telescope by reflection in a small mirror attached to the frame which clasps the suspended magnet. The deflecting magnet is placed sometimes upon one arm, sometimes upon another; but upon whichever it is placed, it, as well as the telescope and graduated scale, are turned round by the observer in observation so far that, upon looking into the telescope, the same division of the scale is seen in the center of the

field as when the deflecting magnet is removed and the wooden frame is in its ordinary position. When this condition is obtained, the relative positions of the deflected magnet and the wooden frame are the same as before, and the deflecting magnet, if placed at first in a direction accurately transverse to the magnetic meridian, is now in a direction accurately transverse to that of the deflected magnet. The measure of the magnetic effort to deflect the magnet is the sine of the angle through which the frame has been turned.

For the measure of this angle, a graduated circle, 23 inches in diameter, is attached to the fixed pedestal, and its divisions are viewed by two micrometer-microscopes connected with the revolving frame.

The deflections were in all cases observed with the magnet placed successively on opposite arms of the wooden frame. The intention of this arrangement was to eliminate all errors arising from a possibly erroneous position of the point of suspension. The whole distance from the place of the center of the deflecting magnet in one position to the center of the same magnet when placed in the opposite position has been measured with great care. The two distances between the centers of the magnets used in all these observations are 1 foot and 1 foot 6 inches.

It is unnecessary here to enter upon the theoretical considerations which show that, when the measure of the deflecting effort is expressed by a series

$$\frac{a}{(\text{distance})^3} + \frac{b}{(\text{distance})^5} + \&c.$$

in descending powers of the distance between the centers of the magnets, the coefficient a is that upon which the measure of terrestrial magnetism will depend. It is proper, however, to mention that, in practice, there is always some uncertainty in the determination of b, and therefore I have thought it best to determine b separately from every series, to adopt the mean of all these values of b as one value applicable in every case, and then, substituting this as a known value in the two equations given by each pair of deflections, to add together the two equations, and thus to form one advantageous equation for determining the value of a.

The observations on which the further calculations are based are those in which the deflecting magnet was East or West of the deflected magnet, with axis directed towards the side of the deflected magnet (called in the tables the "Lateral Position.") Those made with the deflecting magnet North or South of the deflected magnet, with its side towards the end of the deflected magnet, (called in the tables "Axial Position,") are intended only as a check on the others. If the law of attractive and repulsive magnetic forces varying inversely as the square of the distance be correct, and if the observations be accurate, then the value obtained for a' (which corresponds to a as deduced from the other measures) ought to be exactly one-half of that obtained for a. The near agreement of the numbers with this proportion shows that the observations are entirely trustworthy.

The next point is to ascertain the time of vibration of the deflecting magnet when itself subjected to the action of terrestrial magnetism. For this purpose, the deflecting magnet is mounted in the same carrying-piece, and its vibrations are observed by means of the telescope and scale, the times being noted by a solar chronometer whose rate is small. The arc of vibration never exceeds 0°. 30′, so that no correction is necessary for the extent of arc.

Experiments made in 1848, January 10, for the purpose of determining the proportion of the torsion-force of the thread to the terrestrial directive force, gave the following values:

$$\frac{1}{3157'}\ \frac{1}{2093'}\ \text{and}\ \frac{1}{2903'},$$

and the results previously obtained from unrecorded observations were less than the preceding. On account of the smallness and the discordance of these values, no correction for torsion is applied.

It is important, either that the temperature be the same in the observations, or that the corrections for temperature be accurately known. Investigations of the deflexion made at different temperatures from 32° to 99° gave the following results:—

At 32°	the natural sine of deflection was	0·13452
50	,, ,,	0·13437
79	,, ,,	0·13420
99	,, ,,	0·13403

It is evident that the temperature-correction for this magnet is very small, and its magnitude is so uncertain, that I have judged it best to omit it both in these deflection-observations, and in the vibration-observations unaccompanied with deflections which usually follow them.

The Magnet marked $\frac{D}{XX}$ (the same which was used from September 1845), has been employed to produce the deflexion of another magnet, marked $\frac{H}{23}$ (of nearly the same dimensions): and the vibrations then observed are those of $\frac{D}{XX}$.

The weight of $\frac{D}{XX}$ is 507·302 grains, or 32·873 grammes.

The length of $\frac{D}{XX}$ is 0·3025 foot, or 92·198 millimètres.

The diameter of $\frac{D}{XX}$ is 0·025 foot, or 7·620 millimètres.

Its moment of inertia, therefore, (using the English grain and foot as the units of weight and measure,) is 3·88826.

The weight of the embracing frame and mirror is 108·242 grains, or 7·014 grammes; and, on examining the distribution of this weight, it was thought probable that its moment of inertia would be nearly the same as if it were uniformly distributed over the mirror, whose horizontal length is 0·0658 foot; its moment of inertia is therefore 0·03905.

The weight of the suspending stalk with a pulley is 39·377 grains, or 2·552 grammes, and its moment of inertia (estimated as probably the same as if it had been condensed on the pulley whose diameter is 0·0233 foot), is 0·00135.

The following is the explanation of the notation used :—

m = the magnetic moment of the deflecting magnet $\frac{D}{XX}$.

X = the absolute measure of horizontal magnetic force.

K = the moment of inertia of $\frac{D}{XX}$ with its stirrup and pulley as suspended for vibration = 3·92866, using the English foot and grain as the unit of length and weight.

π = the circumference of circle to diameter 1.

T = the time of vibration in seconds of mean solar time.

Then when the natural sine of the observed deflexion (the Deflecting Magnet being in the Lateral Position) is expressed by the formula

$$\frac{a}{(\text{distance})^3} + \frac{b}{(\text{distance})^5}$$

we have for the formulæ of computation

$$\frac{m}{X} = \tfrac{1}{2}\, a$$

$$mX = \frac{\pi^2 K}{T^2}$$

from which m and X are found.

The computation of the values of m and X has, to the year 1857, been made in reference to English measure only, using the foot and the grain as the units of length and weight; but, for comparison with foreign observations of the Absolute Intensity of Magnetism, it is desirable that X should be expressed also in reference to French measure, in terms of the millimètre and milligramme. If an English foot be supposed equal to α times the millimètre, and a grain be equal to β times the milligramme, then it is plain that, for the reduction of $\frac{X}{m}$ and mX to French measure, these must be multiplied by α^3 and $\alpha^2\beta$ respectively. Hence, X^2 must be multiplied by $\frac{\beta}{\alpha}$, and X by $\sqrt{\frac{\beta}{\alpha}}$. Assuming that the mètre is equal to 39·37079 inches, and the gramme

equal to 15·432349 grains, log. $\sqrt{\frac{\beta}{\alpha}}$ will be found to be = 9·6637805, and the factor for reducing the English values of X to French values will be 0·46108, or $\frac{1}{2\cdot1689}$. The values of X in French measure thus derived from those in English measure are given in the proper table.

The natural sine of the observed deflexion, when the Deflecting Magnet is in the Axial Position, is treated in the same manner as the former, for expressing it by the formula

$$\frac{a^1}{(\text{distance})^3} + \frac{b^1}{(\text{distance})^5}$$

but no further use is made of these deflexions.

For the determination of the Absolute Measure of Horizontal Force on those days on which vibrations, unaccompanied by Deflexions, were observed, it is assumed that the quantity m (which is peculiar to the magnet) changes at a uniform rate from one observation of deflexion to the next; and the comparison of its interpolated value with the value of mX given by the vibration determines the value of X.

In the spring of 1861, a Unifilar Instrument, similar in all respects (as is understood) to those used in and issued by the Kew Observatory, was procured by the courteous application of Major-General Sabine, from the makers, Messrs. J. T. Gibson and Son; and after having been subjected to the usual examinations, at the Kew Observatory, for determination of its constants (for which I am indebted to the kindness of Balfour Stewart, Esq.), was mounted at the Royal Observatory. Observations with this instrument commenced on 1861, June 11, and were continued through the year; and, after some slight modifications of its verniers, it is still maintained in use (1864).

The deflected magnet (whose use is merely to ascertain the proportion which the power of the deflecting magnet at a given distance bears to the power of terrestrial magnetism) is 3 inches long, carrying a small plane mirror. The deflecting magnet is 4 inches long; it is a hollow cylinder, carrying in its internal tube a collimator, by means of which its time of vibration is observed in another apparatus. The frame which supports the suspension-piece of the deflected magnet carries also the telescope directed to the magnet-mirror; it rotates round the vertical axis of a horizontal graduated circle whose external diameter is 10 inches.

The method of making observations with this instrument differs in no respect from that used with the old instrument. The deflecting magnet is always used with its end towards the deflected magnet. In the reduction of the observations, the precepts contained in the Skeleton Form prepared by the Kew Observatory have received the strictest attention.

The following is the explanation of the method of reduction.

The distance of the centers of the deflected and deflecting magnet being r_0, it is supposed (from observations made at Kew, of which the details have not reached me)

that the magnetism of the deflecting magnet is so altered by induction that the following multipliers ought to be used in computing the Absolute Force :—

At distance	1·0	foot, factor is	1·00031
	1·1		1·00023
	1·2		1·00018
	1·3		1·00014
	1·4		1·00011
	1·5		1·00009

The correction of the magnetic power for temperature t_0 of Fahrenheit, reducing all to 35° of Fahrenheit, is

$$0\cdot000131261\ (t_0-35)\ +0\cdot000000259\ (t_0-35)^2$$

A_1 is $\frac{1}{2}$(distance)^3 × sine deflection, corrected by the two last-mentioned quantities, for distance 1 foot; A_2 is the similar expression for distance 1·3 foot; A'_2 is $\frac{A_2}{(1\cdot3)^2}$; P is $\frac{A_1-A_2}{A_1-A'_2}$. A mean value of P is adopted from various observations; then $\frac{m}{X}=A_1\times\left(1-\frac{P}{1}\right)$ for smaller distance, or $=A_2\times\left(1-\frac{P}{1\cdot69}\right)$ for larger distance. The mean of these is usually adopted for the true value of $\frac{m}{X}$.

For computing the value of mX from observed vibrations, it is necessary to know K, the moment of inertia of the magnet as mounted. The value of log. π^2K furnished by Mr. Stewart is 1·66073 at temperature 30° and 1·66109 at temperature 90°. Then, putting T for the time of the magnet's vibration as corrected for induction, temperature, and torsion-force, the value of mX is $=$ log. $\frac{\pi^2K}{T^2}$. From the combination of this value of mX with the former value of $\frac{m}{X}$, m and X are immediately found.

As observations were carried on with both instruments from 1861, June 11, to 1862, February 3, it has been judged desirable to exhibit here a comparison of the results. Although the observations were not taken on the same days, yet it is conceived that the difference of the means of the results may with safety be adopted as representing the true difference depending on the peculiarities of each instrument and the peculiarities of each mode of reduction. And, as the observations made with the Old Instrument were conducted precisely in the same way as for many years past, and those with the Kew Unifilar in the way which will probably be continued in future, it is presumed that this comparison will give the means of forming one continuous series commencing with the year 1848.

Taking then the means from the following Table, we have—

Mean of determinations by Old Instrument.....	3·844
Mean of determinations by Kew Unifilar.....	3·811

The determinations with the Old Instrument ought therefore to be diminished by $\frac{1}{117}$ part, to make them comparable with those of the Kew Unifilar.

COMPARISON of RESULTS from the TWO DEFLEXION INSTRUMENTS.

Month and Day, 1861–62.		Value of X in English Measure.		Value of X in French Measure.	
		From Old Instrument.	From Kew Unifilar.	From Old Instrument.	From Kew Unifilar.
1861.					
June	11	...	3·807	...	1·756
	13	3·849	...	1·775	...
	14	...	3·810	...	1·757
July	17	3·859	...	1·779	...
	18	...	3·805	...	1·755
	20	...	3·809	...	1·756
	29	3·842	...	1·772	...
	31	3·833	...	1·767	...
August	1	...	3·806	...	1·755
	2	3·824	...	1·763	...
	3	...	3·803	...	1·754
September	10	3·868	...	1·784	...
October	8	3·854	...	1·777	...
	10	...	3·838	...	1·770
	15	...	3·808	...	1·756
	17	3·826	...	1·764	...
November	7	3·843	...	1·772	...
	11	...	3·806	...	1·755
December	2	...	3·811	...	1·757
	3	3·836	...	1·769	...
	24	3·836	...	1·769	...
1862.					
January	29	...	3·817	...	1·760
	30	3·838	...	1·770	...
	30	...	3·814	...	1·758
	31	3·846	...	1·773	...
February	1	...	3·810	...	1·757
	3	3·867	...	1·783	...

It does not appear that there is any material difference in the accuracy of the two instruments; but as the Kew Unifilar may be assumed to be generally similar in pattern to others of the same class extensively distributed, I have thought it desirable to adopt it, without positively expressing an opinion that a portion of the constant difference above noted may not be truly an error of the Kew Instrument.

§ 10. *Explanation of the Tables of Indications of the Magnetometers.*

The Indications are derived entirely from the measures of the ordinates of the Photographic Curves, except in a few instances in which the results are marked with

an asterisk, in which case the results are those given by eye-observations, usually because the photographic process has failed.

Telescope-observations of the Magnetometers have usually been made four times every day, except on Sundays, on which days two or three observations only have been taken; but, though these observations are employed in forming the base lines on the photographic sheets, their immediate results are not necessarily given in the Tables.

For each photographic record, a new base-line, representing a convenient reading in round numbers of the element to which it applies, has been drawn on the sheet. Then the Assistant, who is charged with the translation of the curve-ordinates into numbers, remarks the salient points of the curve, or the points which if connected by straight lines would produce a polygon not sensibly differing from the photographic curve; to each of these he applies the pasteboard scale proper for the element under consideration; the base of the pasteboard scale determines the time on the time-scale, and the reading of the pasteboard scale for the point of the photographic curve gives the quantity which is to be added to the value for the new base-line. The ordinate-reading so formed is printed without alteration in the Tables. It is particularly to be remarked that the indications for horizontal force and vertical force are *not corrected for temperature.*

In measuring the ordinates of the Vertical Force Curves, the same difficulty that is mentioned in preceding volumes has still occasionally been felt. Apparently without cause, the curve is dislocated; one part being raised above or depressed below the contiguous part, in the direction of the ordinate, usually by small quantities. In all cases the displacement is accompanied by vibration, the original position being at the extremity of the arc of vibration, and the new position being at its center; showing that there has been no want of delicacy in the movement, and that the change is precisely the same as would be caused by the quiet application of a small weight upon one end of the magnet.

In translating the ordinates into numbers on these occasions, two ordinates have been taken for the same abscissa; these are connected, in the printed Indications, by a brace, and the difference of the numbers indicates the amount of the disturbance.

§ 11. *Standard Barometer.*

The Barometer is a standard, by Newman, mounted in 1840. It is fixed on the South wall of the west cross of the Magnetic Observatory. The graduated scale which measures the height of the mercury is made of brass, and to it is affixed a brass rod, passing down the inside of one of the upright supports, and terminating in a conical point of ivory; this point in observation is made just to touch the surface of the mercury in the cistern, and the contact is easily seen by the reflected and the actual point appearing *just* to meet each other. The rod and scale are made to slide up and down by means of a slow-motion screw. The scale is divided to $0^{in.}05$.

The vernier subdivides the scale divisions to $0^{in.}002$; it is moved by a slow-motion screw, and in observation is adjusted so that the ray of light passing under the back and front of the semi-cylindrical plate carried by the vernier, is a tangent to the highest part of the convex surface of the mercury in the tube.

The tube is $0^{in.}565$ in diameter; the correction for the effect of capillary attraction is therefore only $+0^{in.}002$. The cistern is of glass.

At the bottom of the instrument are three screws, turning in the fixed part of the support, and acting on the piece in which the lower pivot of the barometer-frame turns, for adjustment to verticality: this adjustment is examined weekly.

The readings of this barometer are considered to be coincident with those of the Royal Society's flint-glass standard barometer.

All observations of this barometer have been corrected for the difference of temperature of the mercury in the tube at the time of observation from 32°, by the application of the corrections contained in the table for barometers whose scales are engraved upon a rod of brass reaching from the level of the mercury to the vernier. (See the report of the Committee of Physics and Meteorology approved by the Royal Society.)

No correction is required for the difference of capacities of the tube and the cistern; for, as the mercury rises or falls in the cistern by the falling or rising of the mercury in the tube, so the termination of the scale is adjusted to the surface of the mercury in the cistern, and the distance between the surfaces of the mercury in the cistern and the tube is at once measured.

The height of the cistern above the mean level of the sea is 159 feet. This element is founded upon the determination of Mr. Lloyd, in the *Phil. Trans.*, 1831; the elevation of the cistern above the brass piece inserted in a stone in the transit-room (to which Mr. Lloyd refers) being $5^{ft.}2^{in.}$.

The barometer has been read at 21^h, 0^h, 3^h, 9^h (astronomical), on every day, excepting on Sundays, and on Good Friday and Christmas Day, on which days fewer observations have been taken. Every reading has been reduced to the reading which would have been obtained at the temperature 32° of the mercury and scale, by application of the correction given in Table II. (pages 82 to 87) of the Report of the Committee of Physics of the Royal Society. The mean of the reduced readings has then been taken for each civil day, and finally converted into mean daily reading, by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, Part I.

In the printed record of the barometrical and all other meteorological observations, the day is to be understood, generally, as defined in civil reckoning.

§ 12. *Photographic self-registering Apparatus for continuous Record of the Readings of the Barometer.*

In the description of the Photographic self-registering Apparatus for continuous Record of Magnetic Vertical Force, the vertical cylinder covered with photographic

paper and revolving in 24 hours is described. North of the surface of this cylinder, at the distance of about 30 inches, is a large syphon barometer, the bore of the upper and lower extremities of its arms being about 1·1 inch. A glass float in the quicksilver of the lower extremity is partially supported by a counterpoise acting on a light lever (which turns on delicate pivots), so that the wire supporting the float is constantly stretched, leaving a definite part of the weight of the float to be supported by the quicksilver. This lever is lengthened to carry a vertical plate of opaque mica with a small aperture, whose distance from the fulcrum is eight times the distance of the point of attachment of the float wire, and whose movement, therefore, is four times the movement of the column of a cistern-barometer. Through this hole the light of a lamp, collected by a cylindrical lens, shines upon the photographic paper.

The scale of time is established by means of occasional interruptions of the light, and the scale of measure is established by comparison with occasional eye-observations, exactly as for the photographic registers of the magnetometers.

This barometer was brought into use in 1848, but its indications were not satisfactory till the mercury was boiled in the tube by Messrs. Negretti and Zambra on 1853, August 18, since which time they have appeared unexceptionable. Results of the indications are printed in the *Maxima and Minima of the Barometer*, near the end of the Meteorological Results.

§ 13. *Thermometers for ordinary Observation of the Temperature of the Air.*

The Dry-Bulb Thermometer, the Wet-Bulb Thermometer, the Maximum Self-Registering Thermometer, and the Minimum Self-Registering Thermometer, all for determination of the temperature of the air, are mounted on a revolving frame whose fixed vertical axis is planted in the ground. From the year 1846 to 1863 the post forming the vetical axis was about 23 feet south (magnetic) of the S.S.E. angle of the south arm of the Magnetic Observatory; in 1863 it was moved to a position about 35 feet south (astronomical) of the south angle. A frame revolves on this post, consisting of a horizontal board as base, of a vertical board projecting upwards from it connected with one edge of the horizontal board, and of two parallel inclined boards (separated about three inches) connected at the top with the vertical board, and at the bottom with the other edge of the horizontal board. The outer inclined board is covered with zinc. The air passes freely between all these boards.

The dry and wet-bulb thermometers are attached to the outside, and near the center of the vertical board; the maximum and minimum thermometers for air on one side, and those for evaporation on the other side, with their bulbs at almost the same level, and near to those of the dry and wet-bulb thermometers; their bulbs are about 4 feet above the ground and projecting from 2 inches to 3 inches below the horizontal board. Above the thermometers is a small projecting roof to protect them

from rain. The frame is always turned with the inclined side towards the sun. It is presumed that the thermometers are thus sufficiently protected.

The graduations of all the thermometers used in the Royal Observatory rest fundamentally upon those of a Standard Thermometer, the property of Mr. Glaisher, which derives its authenticity from comparison with original thermometers constructed by the late Rev. R. Sheepshanks about the years 1840—1843, in the course of his preparations for the construction of the National Standard of Length. The whole of the radical determinations of Freezing Point, Boiling Point, and Subdivision of Volume of Tube, were made by Mr. Sheepshanks with the utmost care: it is believed that these were the first original thermometers that had been constructed in England for many years. Mr. Glaisher's thermometer has been used as the standard of reference for all the thermometers used in the Royal Observatory since 1840, and for the very numerous thermometers constructed by Messrs. Negretti and Zambra.

The Dry-Bulb Thermometer is by Newman. The corrections required for its readings, as found by comparison with the standard above-mentioned, are as follows:—

Below	32°	subtract	0°·5
Between	32 and 43		0·6
	44 and 47		0·7
	48 and 56		0·9
	57 and 61		1·1
	62 and 74		1·3
	75 and 80		1·5
	81 and 86		1·8
	87 and 95		2·0
	96 and 100		2·2

The Wet-Bulb Thermometer is by Negretti and Zambra. Its bulb is of the same size as that of the Dry-Bulb Thermometer. A piece of muslin is wrapped round the bulb, and a skein of cotton is led from it into a cup of rain-water, by which it is maintained in a state of moisture. In frosty weather the muslin is moistened some time before each observation. The corrections which the readings of this thermometer are found to require are as follows:—

Below	32°	subtract	0°·4
Between	32 and 36		0·3
	37 and 40		0·2
	41 and 55		0·1
	56 and 75		0·0
Above	75	add	0·1

The eye-readings of the dry-bulb and wet-bulb thermometers have usually been taken at the hours (astronomical reckoning) 21^h, 0^h, 3^h, 9^h, and corrected by application of the numbers given above; then their mean has been taken, and a correction

applied, in order to obtain the true diurnal mean. This correction is derived from the numbers in Mr. Glaisher's paper in the Philosophical Transactions for 1848.

The dew-point has been inferred exclusively from the simultaneous observations of the dry-bulb and wet-bulb thermometers, by multiplying the difference between the readings of these thermometers by a factor peculiar to each temperature of the air, and subtracting the product from the reading of the dry-bulb thermometer. These factors have been found by Mr. Glaisher from the comparison of a great number of dew-point observations made with Daniell's hygrometer from 1840 to 1854, with the simultaneous observations of dry-bulb and wet-bulb thermometers. The following table exhibits the factors employed :—

TABLE of FACTORS, by which the DIFFERENCE of READINGS of the DRY-BULB and WET-BULB THERMOMETERS is to be MULTIPLIED in order to PRODUCE the DIFFERENCE between the READINGS of the DRY-BULB and DEW-POINT THERMOMETERS.

Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.
°		°				°		°		°	
20	8·5	32	3·1	44	2·3	56	1·9	68	1·6	80	1·5
21	8·5	33	2·8	45	2·3	57	1·9	69	1·5	81	1·5
22	8·5	34	2·6	46	2·3	58	1·9	70	1·5	82	1·5
23	8·5	35	2·6	47	2·2	59	1·8	71	1·5	83	1·5
24	7·3	36	2·6	48	2·2	60	1·8	72	1·5	84	1·5
25	6·4	37	2·5	49	2·2	61	1·8	73	1·5	85	1·5
26	6·1	38	2·5	50	2·1	62	1·7	74	1·5	86	1·5
27	6·1	39	2·5	51	2·1	63	1·7	75	1·5	87	1·5
28	5·7	40	2·4	52	2·0	64	1·7	76	1·5	88	1·5
29	5·0	41	2·4	53	2·0	65	1·6	77	1·5	89	1·5
30	4·6	42	2·4	54	2·0	66	1·6	78	1·5	90	1·5
31	3·7	43	2·4	55	2·0	67	1·6	79	1·5		

The maximum self-registering thermometer is a mercurial thermometer, of the construction invented by Messrs. Negretti and Zambra. There is a small detached piece of glass in the tube, just above a bent part of the tube (near the bulb), through which the piece of glass cannot pass down. The column of mercury in rising lifts the glass up and passes freely ; but in descending it is unable to pass the glass, and the lower mass of mercury descends, leaving a vacant space below the glass, and leaving a portion of the mercury above it. The piece of glass operates as an efficient valve. The graduation of this thermometer is sensibly correct. There is a similar thermometer for the maximum wet-bulb reading ; its readings are too high by 0°·4.

The minimum self-registering thermometer is an alcohol thermometer, of the construction known as Rutherford's. A sliding glass index allows the alcohol in rising to pass above it, but is drawn down by the peculiar action of the upper surface of the fluid when it sinks. The readings of that which gives the minimum temperature of the air require an additive correction 0°·5 ; those of the minimum wet-bulb temperature require additions varying from 0°·2 to 0°·6.

The numbers in the printed columns of Mean Daily Value of Dry Thermometer are found by combining two numbers derived from different sources. One is the corrected mean of four observations taken in the day, as is described above. The other is the mean of the maximum and minimum corrected by a small quantity depending on the month, given in Mr. Glaisher's paper. The adopted mean temperature is the mean of those two numbers, weights being given proportional to the number of observations from which they are derived.

For the Mean Daily value of Dew Point, the dew-point is found from the observations at 21^h, 0^h, 3^h, 9^h, in the manner above described, and by use of the table of factors given above, and the mean of these dew-points is corrected by a number given in the paper in the Philosophical Transactions 1848.

§ 14. *Photographic self-registering Apparatus for continuous Record of the Readings of the Dry-Bulb and Wet-Bulb Thermometers.*

About 28 feet south (magnetic) of the south-east angle of the south arm of the Magnetic Observatory, and about 25 feet east of the thermometers for eye-observations, is a shed 10 feet square, standing upon posts 9 feet high, under which are placed the photographic thermometers, the dry-bulb thermometer towards the east, and the wet-bulb thermometer towards the west. The bulbs of the thermometers are eight inches in length, and 0·4 inch internal bore, and their centers are about 4 feet above the ground. The bulb of one of the thermometers is covered with muslin throughout its whole length, which is kept moist by means of capillary passage of water along cotton wicks leading to a vessel filled with water.

There are small adjustments admitting the raising or dropping of the thermometers, so that the register of their changing readings may be on a convenient part of the paper. The thermometer frames are covered by plates having longitudinal apertures, so narrow, that any light which may pass through them is completely, or almost completely, intercepted by the broad flat column of mercury in the thermometer-tube. Across these plates a fine wire is placed at every degree; and at the decades of the degrees, and also at 32°, 52°, and 72°, a coarser wire is placed. A gas lamp is placed about 9 inches from each thermometer (east of the dry bulb and west of the wet bulb), and its light, condensed by a cylindrical lens, whose axis is vertical, shines through the thermometer-tube above the surface of the mercury, and forms a well-defined line of light upon the photographic-paper, which is wrapped around the cylinder. As the cylinder revolves under this light, it receives a broad sheet of photographic trace, whose breadth (in the direction of the axis of the cylinder) varies with the varying height of the mercury in the thermometer-tube. The light in its passage is intercepted by the wires placed across the tube at every degree, and there are, therefore, left upon the paper corresponding lines in which there is no photogenic action.

The cylinder revolves in 48 hours; the daily photographic traces of the two ther-

mometers are thus simultaneously registered on opposite sides of the cylinder without intermixing. The length of the cylinder is $13\frac{1}{2}$ inches, and its circumference is 19 inches.

§ 15. *Thermometers for Solar Radiation and Radiation to the Sky.*

The thermometer for Solar Radiation is placed in an open box about 10 feet south of the south-west angle of the south arm of the Magnetic Observatory. The box is about 13 inches high; the bulb of the thermometer is about 10 inches above the bottom of the box, fully exposed to the sun's rays.

The thermometer is a self-registering maximum mercurial thermometer of Negretti and Zambra's construction; its bulb is blackened, and enclosed in a glass sphere from which the air has been exhausted. Its graduations are correct, and the numbers inserted in the tables are those read from the instrument without alteration. The thermometer is read at 9^h a.m., noon, 3^h p.m., and occasionally at 9^h p.m.; the highest of these readings is adopted as the maximum for the day.

Near to this thermometer, within the same box, and at the same height, is placed a thermometer with blackened bulb, which is not inclosed in an exhausted sphere. An instrument of this form and in this position was exclusively used to the year 1859. Simultaneous readings of both instruments are now taken, with the view of rendering the series of observations which terminated in 1859 (made with exposed bulb) comparable with that which commenced in 1859, and is still continued (made with bulb inclosed in an exhausted sphere).

The thermometer for radiation to the sky is placed about 12 feet west of the Solar Radiation thermometer, with its bulb resting on short grass, and fully exposed to the sky. It is a self-registering minimum spirit thermometer of Rutherford's construction, made by Negretti and Zambra. Its graduation is correct, and the numbers inserted in the table are those read from the scale without alteration. It is read every day at 9^h a.m., and occasionally at 9^h p.m.

This thermometer was out of order on June 10, September 18, October 24, and October 29.

§ 16. *Thermometers sunk below the Surface of the Soil at different Depths.*

These thermometers were made by Messrs. Adie of Edinburgh, under the immediate superintendence of Professor (new Principal) J. D. Forbes. The graduation was made by Professor Forbes himself.

The thermometers are four in number. They are all placed in one hole in the ground, the diameter of which in its upper half is 1 foot, and in its lower half about 6 inches. Each thermometer is attached in its whole length to a slender piece of wood, which is planted in the hole with it. The place of the hole is 20 feet south of the extremity of the south arm of the Magnetic Observatory, and opposite the center of its south front.

The soil consisted of beds of sand; of flint-gravel with a large proportion of sand; and of flints with a small proportion of sand, cemented almost to the consistency of pudding-stone. Every part of the gravel and sand extracted from the hole was perfectly dry

The bulbs of the thermometers are cylindrical, 10 or 12 inches long and 2 or 3 inches in diameter. The bore of the principal part of the tubes, from the bulb to the graduated scale, is very small. In that part to which the scale is attached, the tube is larger.

The thermometer No. 1 was dropped into the hole to such a depth that the center of its bulb was 24 French feet (25·6 English feet) below the surface: then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the center of its bulb was 12 French feet below the surface; No. 3 and No. 4 till the centers of their bulbs were respectively 6 and 3 French below the surface; and the hole was then completely filled with dry sand. The upper parts of the tubes, carrying the scales, were left projecting above the surface: No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, the parts 8·5, 10·0, 11·0, and 14·5 inches, respectively are tube with narrow bore.

The projecting parts of the tubes are protected by a wooden case or box fixed to the ground; the sides of the box are perforated with numerous holes, and it has a double roof. In the North face of this box is a large plate of glass through which the thermometers are read. Within the box are two smaller thermometers, one (No. 5) whose bulb is sunk one inch in the ground, and one (No. 6) whose bulb is in the free air nearly in the center of the box.

The fluid of the four long thermometers is alcohol tinged with a red colour.

The values of 1° on the scales of Nos. 1, 2, 3, and 4, are respectively $2^{in.}$, $1^{in.}1$, $0^{in.}9$, and $0^{in.}55$; and the ranges of the scales, as first mounted, were, 43°·0 to 57°·7, 42°·0 to 56°·8, 39°·0 to 57°·5, and 34°·2 to 64°·5.

These ranges for Nos. 2, 3, and 4, were found to be insufficient in some years, particularly those of Nos. 3 and 4, or the thermometers sunk to the depth of 6 feet and 3 feet.

In 1857, June 22, Messrs. Negretti and Zambra removed from Nos. 3 and 4 a quantity of fluid corresponding to the extent of 5° on their scales, and the scales of these two thermometers were lowered by that linear extent, making the readings the same as before.

In subsequent years it was found that the amount of fluid removed was somewhat too great, for now at the lower end of the scale the 6-foot thermometer sometimes falls below the limit of its scale or $43\frac{1}{2}$°; and the 3-foot thermometer below 39°·7; in which cases the alcohol sinks into the capillary tube.

The readings at the early part of the series were at times defective at high temperatures, but always complete at low temperatures; now, they are always complete at

high temperatures, and are at times defective at low temperatures. The two combined however, will enable us to complete all readings.

These thermometers are read once a day, at noon, and the readings appear in the printed volumes as read from their scales without correction.

§ 17. *Thermometers immersed in the Water of the Thames.*

The self-registering maximum and minimum thermometers for determining the highest and lowest temperatures of the water of the Thames are by Messrs. Negretti and Zambra, and are observed every day at 10 a. m.

A strong wooden trunk is firmly fixed to the side of the Dreadnought Hospital Ship, about 5 feet in length, and closed at the bottom; the bottom and the sides, to the height of 3 feet, are perforated with a great number of holes, so that the water can easily flow through; the thermometers are suspended within this trunk so as to be about 2 feet below the surface of the water, and 1 foot from the bottom of the trunk.

The regular observations are made under the superintendence of the Medical Officers of the Ship.

The thermometer for minimum temperature was out of order from January 29 to February 2, and from March 30 to April 2.

§ 18. *Osler's Anemometer.*

This anemometer is self-registering: it was made by Newman, but has received several changes since it was originally constructed. A large vane, which is turned by the wind, and from which a vertical spindle proceeds down nearly to the table in the north-western turret of the ancient part of the Observatory, gives motion by a pinion upon the spindle to a rackwork carrying a pencil. This pencil makes a mark upon a paper affixed to a board which is moved uniformly in a direction transverse to the direction of the rack-motion. The movement of the board is effected by means of a rack connected with the pinion of a clock. The paper has lines printed upon it corresponding to the positions which the pencil must take when the direction of the vane is N., E., S., or W.; and also has transversal lines corresponding to the positions of the pencil at every hour. The first adjustment for azimuth was obtained by observing from a certain point the time of passage of a star behind the vane-shaft, and computing from that observation the azimuth; then on a calm day drawing the vane by a cord to that position, and adjusting the rack, &c., so that the pencil-position on the sheet corresponded to that azimuth.

For the pressure of the wind, the shaft of the vane carries a plate one foot square, which is supported by horizontal rods sliding into grooves, and is urged in opposition

to the wind by three springs, so arranged that only one comes into play when the wind is light, and the others necessarily act in conjunction with the first as the plate is driven further and further by the force of the wind. A cord from this plate passes over a pulley, and communicates with a copper wire passing through the center of the spindle, which at the bottom communicates with another cord passing under a pulley and held in tension by a slight spring; and by this a pencil is moved transversely to the direction in which the paper fixed to the board is carried by the clock. Lines are printed upon the paper corresponding to different values of the pressure; the intervals of these lines were adjusted by applying weights of 1 lb., 2 lbs., &c., to move the pressure-plate in the same manner as if the wind pressed it.

A fresh sheet of paper has been applied to this instrument every day at 22^h mean solar time.

§ 19. *Whewell's Anemometer.*

This anemometer is self-registering: it was made by Simms. A horizontal brass plate is connected with a vertical spindle, which passes down through the axis of a fixed vertical cylinder, and takes a vertical-bearing upon a horizontal plate at the bottom of the vertical cylinder, and a collar-bearing in a horizontal plate at the top of the cylinder. To one side of the brass plate is attached a vane, and by the action of the wind upon this vane the brass plate is turned. Upon the brass plate is mounted the frame, carrying the fly and the first and second toothed wheels: underneath that part of the brass plate which overpasses the top of the cylinder are attached the bars of a frame, that surrounds without touching the cylinder, and extends nearly as low as the bottom of the cylinder (where it is guided by small horizontal rollers, which it carries, and which run upon the surface of the cylinder): this frame is for the purpose of carrying the large vertical screw, fifteen inches in length. The fly has eight sails, resembling the sails of a windmill, but having their surfaces plain, and inclined to the direction of the wind at an angle of 45°: its axis is horizontal. Upon the axis is an endless screw, which works in a vertical wheel of one hundred teeth, and upon the axis of this wheel is an endless screw, which works in a horizontal wheel of one hundred teeth; and this horizontal wheel is connected with the top of the great vertical screw. Ten thousand revolutions of the fly therefore produce one revolution of the vertical screw. A concave screw (which admits of being opened at pleasure, for detaching it from the vertical screw) is clamped, so as to embrace the vertical screw, and is carried downwards by its circular motion. To this concave screw is attached a pencil, which in its descent touches the fixed vertical cylinder. The surface of the cylinder is divided by vertical lines into sixteen equal parts, corresponding to the sixteen parts of the circle of azimuth; and the letters indicating the principal points of the compass are painted on it at these lines. Near to the vertical screw, and parallel to it, is fixed a rod, which is one of the bars of the frame before described: a scale upon this rod is

divided to tenths of inches, and an index slides upon it. This index turns freely upon the scale, and has a projecting point, which can be brought into contact with that part of the cylinder on which the pencil marks are registered. Bringing this point successively into contact with the extreme upper and lower marks made each day, the difference of the scale-readings would give the descent of the pencil for the day; but the practice has generally been to apply a pair of compasses to the cylinder, and then to ascertain the descent by means of the vertical scale.

The instrument is read off every day at 22^h. The pencil in descending marks a broad path in consequence of the oscillations of the vane; the darkest part of this path is observed, and that direction is recorded to which this dark part is nearest The descent in inches, corresponding to each direction of the wind, is taken by applying a pair of compasses to the cylinder, and then ascertaining the amount by means of the vertical scale; the sum of all the descents belonging to each successive change of the wind is checked each day by the total descent of the pencil, as shown by the space between the position of the index as previously left, and its position at the time of reading.

The instrument is fixed on a small wooden erection, of about ten feet in height, placed on the leads above the highest part of the Observatory, in which situation it is nearly free on all sides; an inconsiderable portion only being sheltered by the time ball, whose diameter is five feet, resting on the N.E. turret; the distance between the anemometer and the center of the ball is about twenty feet.

The zero of the instrument was determined by means of Osler's Anemometer. At the time a steady south wind was blowing; the instrument was set nearly in the right direction by hand; there was but little friction, and the pencil was on the line marked *S* on the cylinder: its zero was considered to be well determined.

The following are measures of the principal parts of the anemometer:—

The length of each sail from axis to end is	$2^{in}\cdot30$
The length of the flat part of each sail is.....	$1^{in}\cdot92$
The inclination of each sail to the wind is	45°
45 revolutions of the vertical screw correspond to	2 inches
The number of teeth in the vertical wheel is	100*
The number of teeth in the horizontal wheel is also	100

Therefore, 10,000 revolutions of the fly cause the pencil to descend through the distance of one thread of the vertical screw, or through a space equal to $\frac{2}{45}$ inches = $0^{in}\cdot044$.

Assuming that the effective radius of the sail is.....	$1\cdot7^{in}$
Then the circumference described is $1^{in}\cdot7 \times 2\pi =$	$10\cdot68$
Therefore the motion of the wind in one revolution is.....	$10\cdot68$
,, in 10,000 revolutions	106800 inches

corresponding to $0^{in}\cdot044$ of the vertical screw, or to one revolution of the screw.

From this it follows, that the motion of the wind, corresponding to the descent of the pencil through one inch, is 200,250 feet, or 37·9 miles. The comparison of the results of Whewell's Anemometer with those of Robinson's Anemometer (to be mentioned immediately) gives reason for thinking that in the elements of this calculation there is some serious error.

§ 20. *Robinson's Anemometer.*

This anemometer is self-registering, and was made by Messrs. Negretti and Zambra on the principles described by Dr. Robinson in the Transactions of the Royal Irish Academy, vol. xxii. It is furnished with four hemispherical cups [each being 3·75 inches in diameter], attached to the extremities of two arms at right angles to each other, and revolving in a horizontal plane by the excess of pressure of the wind on their concave over that on their convex surfaces.

The distance between the centers of opposite cups is 13·45 inches, and their centers describe 42·24 inches in each revolution, indicating, according to the theory, a horizontal movement of the air of 126·72 inches for each revolution, and of one mile for 500 revolutions. The accuracy of this theory was verified by experiments made in 1860 (to be described immediately). The horizontal arms are connected with a vertical spindle, upon which is an endless screw, working in a toothed wheel connected with a train of wheels, furnished with indices capable of registering one mile and decimal multiples of a mile up to 1,000 miles. The instrument is read every day at 22^h.

In the year 1860, on July 3, 4, and 13, experiments were made in Greenwich Park to ascertain the correctness of the theory of Robinson's anemometer; the point to be verified being that the scale of the instrument, founded on the supposition that the horizontal motion of the air is about three times the space described by the centers of the cups, is correct.

A post about 5 feet high with a vertical spindle in the top was erected, and on this spindle turned a horizontal arm, carrying at the extremity of its longer portion Robinson's anemometer, and on its shorter portion a counterpoise. The distance from the vertical spindle of the post to the vertical axis of the anemometer was $17^{ft.}\ 8^{in.}7$. The reading of the dial was taken, and then the arm was made to revolve in the horizontal plane 50 or 100 times, an attendant counting the number of revolutions, and the reading of the dial was again taken. In this manner 1,000 revolutions were made in the direction N.E.S.W.N., and 1,000 revolutions in the direction N.W.S.E.N. In some of the experiments the air was sensibly quiet, and in others there was a little wind; the result was,

For a movement of the instrument through one mile,

Beam revolving N.E.S.W. (opposite to the direction of rotation of the Anemometer)	1·15 was registered
Beam revolving N.W.S.E. (in the same direction as the Anemometer)	0·97 was registered

The results from rapid revolutions and from slow revolutions were sensibly the same.

This may be considered as confirming in a very high degree the accuracy of the theory.

As Whewell's and Robinson's Anemometers had both been in action during the years 1860 and 1861, abundant means existed for comparing their indications. The ratio of the apparent movements of the air (that by Whewell's being founded on a calculation given above, and that by Robinson's, supposing its register to be accurate) was found to depend very systematically upon the whole value of the registered movement. From a discussion of the comparison of the two records the following table was formed:—

FACTORS to be MULTIPLIED into the READINGS of WHEWELL'S ANEMOMETER EXPRESSED in MILES, at DIFFERENT VELOCITIES of the WIND, in order to DETERMINE the HORIZONTAL MOVEMENT of the AIR in MILES, as it would have been shown by the use of ROBINSON'S ANEMOMETER.

Daily Horizontal Movement in Miles, as shown by Whewell's Anemometer.	Factors to be multiplied into results by Whewell's Anemometer, to convert them into results by Robinson's Anemometer.
Less than 10	9·95
From 10 to 20	7·62
20 to 30	5·38
30 to 40	4·10
40 to 50	3·40
50 to 60	3·00
60 to 70	2·75
70 to 80	2·56
80 to 90	2·44
90 to 100	2·36
100 to 110	2·30
110 to 120	2·25
120 to 130	2·21
130 to 140	2·17
140 to 150	2·14
150 to 160	2·12
160 to 170	2·10
Above 170	2·09

§ 21. *Rain Gauges.*

The rain-gauge connected with Osler's anemometer is 50 feet 8 inches above the ground, and 205 feet 6 inches above the mean level of the sea. It exposes to the rain an area of 200 square inches (its horizontal dimensions being 10 by 20 inches).

The collected water passes through a tube into a vessel suspended in a frame by spiral springs, which lengthen as the water increases, until 0·24 of an inch is collected in the receiver; it then discharges itself by means of the following modification of the syphon. A copper tube, open at both ends, is fixed in the receiver, in a vertical

position, with its end projecting below the bottom. Over the top of this tube a larger tube, closed at the top, is placed loosely. The smaller tube thus forms the longer leg, and the larger tube the shorter leg of a syphon. The water, having risen to the top of the smaller tube, gradually falls through it into the uppermost portion of a tumbling bucket, fixed in a globe under the receiver. When full, the bucket falls over, throwing the water into a small pipe at the lower part of the globe; the water completely fills the bore of the pipe; its descent causes an imperfect vacuum in the globe, sufficient to cause a draught in the longer leg of the syphon, and the whole contents run off. After leaving the globe, the water is received in a pipe attached to the building, which carries it away. The springs then shorten and raise the receiver. The ascent and descent of the water-vessel move a radius-bar which carries a pencil; and this pencil makes a trace upon the paper carried by the sliding-board of the self-registering anemometer.

The scale of the printed paper was adjusted by repeatedly filling the water-vessel until it emptied itself, then weighing the water, and thus ascertaining its bulk, and dividing this bulk by the area of the surface of the rain receiver.

A second gauge, with an area 77 square inches nearly, is placed close to the preceding, the receiving surface of both being on the same horizontal plane.

A third gauge is placed on the roof of the Octagon room, at 38 feet $4\frac{1}{2}$ inches above the ground, and 193 feet $2\frac{1}{2}$ inches above the mean level of the sea. It is a simple cylinder gauge, 8 inches in diameter and about $50\frac{1}{4}$ inches in area. The height of the cylinder is $13\frac{1}{2}$ inches; at the depth of 1 inch from the top within the cylinder is fixed a funnel (an inverted cone) of 6 inches perpendicular height; with the point of this funnel is connected a tube, $\frac{1}{5}$ of an inch in diameter, and $1\frac{1}{2}$ inch in length; $\frac{3}{4}$ of an inch of this tube is slightly curved, and the remaining $\frac{3}{4}$ of an inch is bent upwards, terminating in an aperture of $\frac{1}{8}$ of an inch. By this arrangement, the last few drops of water remain in the bent part of the tube, and the water is some days evaporating. The upper part of the funnel or bore of the cone is connected with a brass ring, which has been turned in a lathe, and this is connected with a circular piece 6 inches in depth, which passes outside the cylinder, and rests in a water joint, attached to the inner cylinder, and extending all round.

A fourth gauge is placed on the top of the Library; it is a funnel, whose diameter is 6 inches; its exposed area is $28\frac{1}{4}$ inches nearly. The water passes into a cylinder, from which it is poured into a circular vessel, the diameter of which is $3\frac{1}{4}$ inches; and therefore 3·4 inches of this corresponds to 1 inch of rain. The receiving surface of the gauge is 22 feet 4 inches above the ground, and 177 feet 2 inches above the mean level of the sea.

A fifth gauge is planted on the roof of the Photographic Thermometer stand, 10 feet above the ground, and 164 feet 10 inches above the mean level of the sea. Its construction is the same as that of the third gauge.

A sixth gauge is a self-registering rain-gauge on Crosley's construction, made by

Watkins and Hill. The surface exposed to the rain is 100 square inches. The collected water falls into a vibrating bucket, whose receiving concavity is entirely above the center of motion, and which is divided into two equal parts by a partition whose plane passes through the axis of motion. The pipe from the rain-receiver terminates immediately above the axis. Thus that part of the concavity which is highest is always in the position for receiving water from the pipe. When a certain quantity of water has fallen into it, it preponderates, and, falling, discharges its water into a cistern below; then the other part of the concavity receives the rain, and after a time preponderates. Thus the bucket is kept in a state of vibration. To its axis is attached an anchor with pallets, which acts upon a toothed wheel by a process exactly the reverse of that of a clock-escapement. This wheel communicates motion to a train of wheels, each of which carries a hand upon a dial-plate; and thus inches, tenths, and hundredths are registered. Sometimes, when the escapement has obviously failed, the water which has descended to the lower cistern has again been passed through the gauge, in order to enable an assistant to observe the indication of the dial-plates without fear of an imperfection in the machinery escaping notice. This gauge is placed on the ground, 21 feet South of the Magnetic Observatory, and 156 feet 6 inches above the mean level of the sea.

The seventh and eighth gauges are placed near together, about 16 feet south of the Magnetic Observatory, 5 inches above the ground, and 155 feet 3 inches above the mean level of the sea. They are similar in construction and area to No. 3. These cylinders are sunk about 8 inches in the ground.

All these gauges, except No. 7, are read at 22^h daily; in addition, Crosley's gauge and No. 8 are read daily at 9^h p.m., and No. 7 at the end of each month only, to check the summation of the daily readings of No. 8.

Gauges Nos. 1, 2, 3, 5, 8 were made by Messrs. Negretti and Zambra; No. 4 by Troughton; No. 6 by Watkins and Hill; and No. 7 is an old gauge.

§ 22. *The Actinometer.*

The Actinometer used in former years is described in the Introduction to the *Magnetical and Meteorological Observations*, 1847. It has not been used for several years, and will probably require some modifications before it is again used.

§ 23. *Electrical Apparatus.*

The electrical apparatus consists of two parts, namely, the Moveable Apparatus, which is connected with a pole nearly 80 feet high planted 7 feet North and 2 feet East of the north-east angle of the north arm of the Magnetic Observatory (before its extension in 1863); and the Fixed Apparatus, which is mounted in a projecting window in the ante-room of the Magnetic Observatory.

On the top of the pole is fixed a projecting cap, to which are fastened the ends of

two iron rods, which terminate in a pit sunk in the ground, and are kept in tension by attached weights. These rods are to guide the moveable apparatus in its ascents and descents. Near the bottom of the pole is fixed a windlass; the rope upon which it acts passes over a pulley in the cap, and is used to raise the moveable apparatus, which when raised to the top is suspended on a hook.

The moveable apparatus consists of the following parts:—A plank in a nearly vertical position is attached to perforated iron bars, which slide upon the iron rods. On the upper part of this plank is a cubical box. The box incloses a stout pillar of glass, having a conical hollow in its lower part. In the bottom of the box there is a large hole, through which a cone of copper passes into the conical hollow of the glass pillar. In a space below the box a gas-lamp is placed, by the flame of which the copper cone and the lower part of the glass pillar are kept in a state of warmth. A copper wire is fastened round the glass pillar; its end is carried to a similar glass pillar, warmed in the same manner, near the north-western turret of the Octagon room; by this wire, whose length is about 400 feet, the atmospheric electricity is collected. To this wire, near the box, is attached another copper wire 0·1 inch in diameter, and about 73 feet long, at the end of which is a hook; a loaded brass lever connected with the fixed apparatus presses upon this hook, and thus keeps the wire in a state of tension, and at the same time establishes the electrical communication between the long horizontal wire and the fixed apparatus.

The fixed apparatus consists of these parts:—A glass bar, nearly 3 feet long, and thickest at its middle, is supported in a horizontal position, its ends being fixed in the sides of the projecting window. Near to each end is placed a small gas-lamp, whose chimney encircles the glass, and whose heat keeps the glass in a state of warmth proper for insulation. A brass collar surrounds the center of the glass bar; it carries one brass rod, projecting vertically upwards through a hole in the roof of the window-recess, to which rod are attached a small umbrella and the loaded lever above mentioned; and it carries another rod projecting vertically downwards, to which is attached a horizontal brass tube in an East and West direction. On the North and South sides of this tube there project four horizontal rods, through the ends of which there pass vertical rods, which can be fixed by screws at any elevation; these are placed in connexion with the electrometers, which rest on the window seat.

The electrometers during the year 1862 consisted of a Double Gold Leaf Electrometer of the ordinary construction; two Volta's Electrometers, denoted by Nos. 1 and 2; a Henley's Electrometer; a Ronalds' Spark Measurer; a Dry-pile Apparatus; and a Galvanometer.

Volta 1 and Volta 2 are of the same construction; each is furnished with a pair of straws 2 Paris inches in length; those of the latter being much heavier than those of the former: each instrument is furnished with a graduated ivory scale, whose radius is 2 Paris inches, and it is graduated into half Paris lines. In the original construction of these instruments it was intended that each division of No. 2 should correspond to five of No. 1: the actual relation between them has not yet been determined by

observations at the Royal Observatory. The straws are suspended by hooks of fine copper wire to the suspension-piece, and they are at the distance of half a line from each other.

Henley's Electrometer is supported on the West end of the large horizontal tube by means of a vertical rod fixed in it. On each side of the upper part of this rod is affixed a semicircular plate of ivory, whose circumference is graduated; at the centers of these ivory plates two pieces of brass are fixed, which are drilled to receive fine steel pivots, carrying a brass axis, into which the index or pendulum is inserted; the pendulum terminates with a pith ball. The relation between the graduations of this instrument and those of the other electrometers has not been determined. This instrument has seldom been affected till Volta 2 has risen to above 100 divisions of its scale.

The spark-measurer is similar in its construction to that at the Observatory at Kew. It consists of a vertical sliding rod terminated by a brass ball, which ball can be brought into contact with one of the vertical rods before referred to, also terminating in a ball; and it can be moved from it or towards it by means of a lever, with a glass handle. During the operation of separating the balls, an index runs along a graduated scale, and exhibits the distance between the balls, and this distance measures the length of the spark.

The electrometers and the spark-measurer were originally constructed under the superintendence of Francis Ronalds, Esq., but have since received small alterations.

The dry-pile apparatus was made by Watkins and Hill; it is placed in connexion with the brass bar by a system of wires and brass rods. The indicator, which vibrates between the two poles, is a small piece of gold leaf. This instrument is very delicate, and it indicates at once the quality of the electricity. When the inclination of the gold leaf is such that it is directed towards the top of either pile, it remains there as long as the quantity of electricity continues the same or becomes greater: the position is sometimes expressed in the notes by the words " as far as possible." The angle which the gold leaf makes with the vertical at this time is about 40°.

The galvanometer was made by Gourjon of Paris, and consists of an astatic needle, composed of two large sewing needles, suspended by a split silk fibre, one of the needles of the pair vibrating within a ring formed by 2,400 coils of fine copper wire. The connexions of the two portions of wire forming these 2,400 coils are so arranged that it is possible to use a single system of 1,200 coils of single wire, or a system of 1,200 coils of double wire, or a system of 2,400 coils of single wire: in practice the last has always been used. A small ball communicating by a wire with one end of the coils is placed in contact at pleasure with the electric conductor, and a wire leading from the other end of the coil communicates with the earth. An adjustible circular card, graduated to degrees, is placed immediately below one of the needles; the numeration of its divisions proceeds in both directions from a zero. One of these directions is distinguished by the letter A, and the other by the letter B; and the nature of the indication represented by the deflexion of the needle towards A or towards B will be

ascertained from the following experiment. A voltaic battery being formed by means of a silver coin and a copper coin, having a piece of blotting paper moistened with saliva between them: when the copper touches the small ball, and the wire which usually communicates with the earth is made to touch the silver, the needle turns towards A; when the silver touches the small ball, and the wire is made to touch the copper, the needle turns towards B.

§ 24. *Explanations of the Tables of Meteorological Observations.*

The mean daily value of the difference between dew-point temperature and air-temperature is the difference between the two numbers in the sixth and seventh columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, or they are found from the absolute maxima and minima, as determined by comparing the observations of the self-registering wet-bulb thermometers with those of the self-registering dry-bulb thermometers.

The difference between the mean temperature for the day and the mean for the same day of the year on an average of forty-three years, is found by comparison with a table of results deduced by Mr. Glaisher from forty-three years' observations, made at the Royal Observatory, ending 1856.

Little explanation of the results deduced from Osler's Anemometer appears to be necessary. It may be understood generally that the greatest pressure occurred in gusts of short duration.

The amount of movement of air here exhibited as inferred from Whewell's Anemometer is to be understood as from 22^h to 22^h (10^h A.M. to 10^h A.M.), the numbers being placed opposite to the day preceding the civil day on which the instrument is read.

Robinson's Anemometer is read off every day at 22^h (10^h A.M.).

The register of rain is read at 9^h P.M. from the Cylinder Rain-gauge partly sunk in the ground, described above as the "eighth." If, however, there appears to be any doubt as to the correctness of the results, reference is made to a Rain-gauge of similar construction and placed near to it, called above the "seventh."

For understanding the divisions of time under the heads of Electricity and Weather, the following remarks are necessary:—The day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is roughly subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the remarks before it apply (roughly) to the interval from midnight to 6 A.M., and those following it to the interval from 6 A.M. to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column.

The following is the explanation of the notation employed for record of electrical observations, it being premised that the quality of the Electricity is always to be supposed positive when no indication of quality is given :—

g cur. denotes *galvanic currents*
m ... *moderate*
N ... *negative*
P ... *positive*

s denotes *strong*
sp ... *sparks*
v ... *variable*
w ... *weak*

The duplication of the letter denotes an intensity of the modification described: thus, s s is very strong ; v v, very variable.

The Clouds and Weather are described generally by Howard's Nomenclature ; the figure denotes the proportion of sky covered by clouds, the whole sky being represented by 10. The notation is as follows :—

a denotes *aurora borealis*
ci ... *cirrus*
ci-cu ... *cirro-cumulus*
ci-s ... *cirro-stratus*
cu ... *cumulus*
cu-s ... *cumulo-stratus*
d ... *dew*
h-d ... *heavy dew*
f ... *fog*
th-f ... *thick-fog*
fr ... *frost*
gt-glm ... *great gloom*
h-fr ... *hoar frost*
h ... *haze*
hl ... *hail*
so-ha ... *solar halo*
l ... *lightning*
li-cl ... *light clouds*
lu-co ... *lunar corona*
lu-ha ... *lunar halo*
m ... *meteor*
ms ... *meteors*
n ... *nimbus*
r ... *rain*
th-r ... *thin rain*
oc-r ... *occasional rain*
fr-r ... *frozen rain*
h-r ... *heavy rain*

shs-r denotes *showers of rain*
c-r ... *continued rain*
c-h-r ... *continued heavy rain*
m-r ... *misty rain*
fr-m-r ... *frequent misty rain*
sl-r ... *slight rain*
h-shs ... *heavy showers*
fr-shs ... *frequent showers*
fr-h-shs ... *frequent heavy showers*
li-shs ... *light showers*
oc-shs ... *occasional showers*
sq ... *squall*
sqs ... *squalls*
fr-sqs ... *frequent squalls*
h-sqs ... *heavy squalls*
fr-h-sqs ... *frequent heavy squalls*
sc ... *scud*
li-sc ... *light scud*
sl ... *sleet*
sn ... *snow*
sl-sn ... *slight snow*
s ... *stratus*
t ... *thunder*
t-s ... *thunder storm*
v ... *variable*
w ... *wind*
st-w ... *strong wind*

The foot-notes show the means and extremes of readings, and their departure in each month from average values, as found from the preceding Twenty-one Years' Observations; those relating to Humidity have been calculated from the Second Edition of Glaisher's Hygrometrical Tables.

§ 25. *Details of the Chemical Operations for the Photographic Records.*

Mr. Glaisher has drawn up the following account of the Chemical Processes employed in the Photographic Operations for the self-registration of the Magnetical and Meteorological Indications.

Chemical Preparation and Treatment of the Photographic Paper for Primaries.

The paper used is similar to that made by Whatman; it is made by his successor Hollingsworth; it is strong and of even texture, and is prepared expressly for Photographic purposes.

First Operation.—Preliminary Preparation of the Paper.

The chemical solutions used in this process are the following:—

(1.) Sixteen grains of Iodide of Potassium are dissolved in one ounce of distilled water.

(2.) Twenty-four grains of Bromide of Potassium are dissolved in one ounce of distilled water.

(3.) When the crystals are dissolved, the two solutions are mixed together, forming the iodising solution. The mixture will keep through any length of time. Immediately before use, it is filtered through filtering paper.

A quantity of the paper, sufficient for the consumption of several weeks, is treated in the following manner, sheet after sheet.

The sheet of paper is pinned by its four corners to a horizontal board. Upon the paper, a sufficient quantity (about 50 minims, or $\frac{5}{48}$ of an ounce troy) of the iodising solution is applied, by pouring it upon the paper in front of a glass rod, which is then moved to and fro till the whole surface is uniformly wetted by the solution. Or, the solution may be evenly distributed by means of a camel's hair brush.

The paper thus prepared is allowed to remain in a horizontal position for a few minutes, and is then hung up to dry in the air; when dry, it is placed in a drawer, and may be kept through any length of time.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

A solution of Nitrate of Silver is prepared by dissolving 50 grains of crystallized Nitrate of Silver in one ounce of distilled water. In hot weather a few drops of Acetic Acid are added.

Then the following operation is performed in a room illuminated by yellow light.

The paper is pinned as before upon a board somewhat smaller than itself, and (by means of a glass rod, as before,) its surface is wetted with 50 minims of the nitrate of silver solution. It is allowed to remain a short time in a horizontal position, and, if any part of the paper still shines from the presence of a part of the solution unabsorbed into its texture, the superfluous fluid is taken off by the application of blotting paper.

The paper, still damp, is immediately placed upon the interior glass cylinder, and is covered by the exterior glass cylinder, and the united cylinders are mounted upon the revolving apparatus, to receive the spot of light formed by the mirror, which is carried by the magnet; or to receive the line of light passing through the thermometer tube.

Third Operation.—Development of the Photographic Trace.

When the paper is removed from the cylinder, it is placed as before upon a board, and a saturated solution of Gallic Acid, to which a few drops of Aceto-Nitrate of Silver are added, (in hot weather this solution is used at the temperature of the air, in cold weather it is heated to the temperature of 70° or 80°, or even higher if the weather is very cold,) is spread over the paper by means of a glass rod, and this action is continued until the trace is fully developed. When the trace is well developed, the paper is placed in a vessel with water, and repeatedly washed with several waters; a brush being passed lightly over both sides of the paper to remove any crystalline deposit.

Fourth Operation.—Fixing the Photographic Trace.

The Photograph is placed in a solution of Hyposulphite of Soda, made by dissolving four or five ounces of the Hyposulphite in a pint of water; it is plunged completely in the liquid, and allowed to remain from one to two hours, until the yellow tint of the Iodide of Silver is removed. After this the sheet is washed repeatedly with water, allowed to remain immersed in water for 24 hours, and afterwards placed within folds of linen cloths till nearly dry. Finally it is placed between sheets of blotting-paper.

CHEMICAL PREPARATIONS AND TREATMENT ON THE PHOTOGRAPHIC PAPER FOR SECONDARIES.

The paper used is made by Rive; it is a strong wove paper of tolerably even texture, thin, but able to bear a great deal of wear.

First Operation.—Preliminary Preparation of the Paper.

The chemical solution required for this purpose is as follows:—

Two grains of Chloride of Ammonia are dissolved in one ounce of distilled water.

A sufficient quantity of this solution is placed in a flat-bottomed porcelain dish, and sheets of paper, one by one, are plunged within it; care being taken that no air bubbles remain between the paper and the solution; this may be prevented by slight pressure over the sheet by means of a bent glass rod. When a few sheets are thus immersed, they are turned over, and are taken out and hung to dry. Any number of sheets may thus be prepared.

An equally good result is obtained, by spreading over one side by means of a glass rod, as in the preparation of the Primaries, a solution of Chloride of Ammonia made by dissolving five grains in one ounce of distilled water.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

The solution required for this purpose is as follows:

To a filtered solution of Crystallized Nitrate of Silver, (made by dissolving 50 grains of Nitrate of Silver in one ounce of distilled water,) some strong solution of Ammonia is added; the whole becomes at first of a dark brown colour, but when a sufficient quantity of Ammonia is added the solution becomes perfectly clear; a few crystals of Nitrate of Silver are then added till the solution is a little dull, forming "Ammoniacal Nitrate of Silver;" it is then ready for use.

The following operation is performed in a room illuminated by yellow light:—

By means of a glass rod this solution is spread over the paper, whilst pinned on a board; the paper is dried before a fire, and is then in a fit state to be used for producing a Secondary.

Third Operation.—Formation of the Photographic Copy.

A sheet of the paper so prepared is placed in a printing frame with its prepared side upwards, upon a bed of blotting paper resting upon a sheet of plate-glass; the Primary is then placed on the paper with its own face downwards; and as it is necessary, for obtaining a correct copy of the Primary, that it should be in close contact with the prepared surface, a second sheet of plate-glass is placed over it, and the two are pressed together by clamps and screws. The whole is then exposed to the light (the Primary to be copied being above the paper on which the copy is to be made). The time required to produce a copy depends, in a great measure, upon the thickness of the paper on which the Primary is made, and on the actinic quality of the light; a period of five minutes in a bright sunshine, or one hour in clear daylight, is generally sufficient.

Fourth Operation.—Fixing the Photographic Secondary.

When an impression has been thus obtained, it is necessary that the undecomposed Salts of Silver remaining in the paper be removed.

For this purpose the Secondary is at once plunged into water and well washed on both sides, passing a camel's hair brush over every part of it; it is then plunged into a solution of Hyposulphite of Soda (made by dissolving two or three ounces of the Hyposulphite in a pint of water), and is left through a period varying from half an hour to an hour. It is then removed, and washed in plain water several times; and running water is allowed to pass over it for twenty-four hours.

The sheets are then placed within the folds of drying cloths, till nearly dry, and finally between sheets of blotting paper.

The process of obtaining a Tertiary from a Secondary is in every respect the same as that of obtaining a Secondary from a Primary.

§ 26. *Personal Establishment.*

The personal establishment during the year 1862 has consisted of James Glaisher, Esq., F.R.S., Superintendent of the Magnetical and Meteorological Department, and Mr. Thomas Downs, Assistant.

Four junior computers have usually been attached to the Department.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS.

1862.

ROYAL OBSERVATORY, GREENWICH.

INDICATIONS

OF

MAGNETOMETERS.

1862.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 1 h m	° ′ ″	Jan. 1 h m		Jan. 1 h m		Jan. 1 h m	°	°
	(†)		(†)	0. 0	·02458	0. 0	41 ·2	43 ·0
1. 3	21. 5. 55	0. 39	·1120	2. 17	·02480	1. 0	41 ·8	43 ·1
2. 14	8. 20	1. 8	·1116	5. 58	·02359	2. 0	42 ·5	43 ·7
2. 27	9. 30	2. 13	·1122	10. 38	·02237	3. 0	43 ·2	44 ·2
3. 30	5. 30	2. 51	·1118	11. 47	·02230	6. 0	44 ·5	45 ·2
4. 6	8. 5	3. 40	·1118	12. 13	·02201	9. 0	44 ·1	45 ·5
4. 15	7. 35	4. 53	·1124	21. 21	·02169	12. 0	43 ·6	45 ·0
4. 57	8. 0	4. 54	·1122	23. 59	·02240	18. 0	43 ·2	45 ·0
5. 20	21. 7. 10	5. 30	·1122			21. 0	42 ·8	45 ·0
6. 52	20. 59. 10	6. 23	·1111			22. 0	43 ·8	45 ·5
7. 33	21. 3. 15	6. 38	·1114			23. 0	44 ·5	45 ·8
8. 3	21. 0. 0	6. 51	·1109					
9. 35	20. 57. 15	6. 59	·1111					
10. 18	54. 30	7. 30	·1103					
11. 18	20. 58. 35	8. 8	·1114					
12. 11	21. 0. 15	8. 29	·1106					
12. 27	20. 55. 25	8. 49	·1102					
12. 32	56. 30	8. 51	·1105					
12. 52	51. 45	8. 58	·1102					
13. 5	53. 10	9. 13	·1117					
13. 10	52. 50	9. 26	·1113					
13. 52	57. 30	9. 41	·1118					
14. 4	20. 56. 20		***					
15. 11	21. 0. 0	10. 31	·1116					
15. 48	20. 58. 15	10. 43	·1113					
	***	10. 51	·1115					
21. 18	21. 2. 10	11. 3	·1109					
	(†)	11. 12	·1110					
		11. 19	·1104					
		11. 35	·1111					
		11. 52	·1108					
		12. 13	·1112					
		12. 29	·1122					
		12. 45	·1111					
		13. 3	·1115					
		13. 17	·1111					
		13. 38	·1116					
		14. 0	·1117					
		14. 8	·1113					
		14. 24	·1114					
		14. 38	·1117					
		15. 23	·1117					
		15. 37	·1119					
		16. 5	·1116					
		16. 30	·1119					
		16. 38	·1115					
		16. 55	·1119					
		19. 1	·1122					
		20. 12	·1127					
		20. 58	·1116					
		21. 21	·1119					
		21. 44	·1118					
		21. 54	·1120					
		22. 33	·1117					
		23. 44	·1113					
		23. 59	·1110					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 2 h m	° ′ ″	Jan. 2 h m		Jan. 2 h m		Jan. 2 h m	°	°
3. 0	21. 2. 53*	0. 0	·1110	0. 0	·02240	0. 0	45 ·0	46 ·3
9. 0	20. 50. 29*	0. 10	·1112	1. 58	·02167	1. 0	45 ·3	46 ·5
21. 0	57. 40*	0. 28	·1106	2. 47	{·02120	3. 0	47 ·3	48 ·2
			(†)		{·02162	9. 0	47 ·7	48 ·3
		1. 0	·1103*	2. 58	·02163	21. 0	44 ·0	45 ·0
		3. 0	·1111*	3. 10	·02275			
		6. 57	·1109	3. 49	·02230			
		7. 8	·1111	3. 59	·02246			
		7. 22	·1110	4. 40	·02207			
		7. 38	·1113	4. 50	·02231			
		9. 0	·1108	5. 27	·02202			
		9. 31	·1102	5. 39	·02228			
		9. 55	·1125	6. 19	·02220			
		10. 5	·1114	6. 45	·02236			
		10. 12	·1114	7. 40	·02217			
		10. 38	·1100	9. 42	·02206			
		10. 49	·1104	13. 8	·02179			
		11. 10	·1104	18. 40	·02291			
		11. 27	·1108	22. 44	·02450			
		11. 37	·1107	23. 59	·02508			
		11. 55	·1112					
		12. 0	·1110					
		12. 46	·1112					
		13. 41	·1119					
		14. 5	·1116					
		14. 19	·1119					
		14. 48	·1118					
		15. 18	·1121					
		15. 48	·1116					
		16. 15	·1122					
		16. 34	·1123					
		17. 13	·1122					
		17. 43:	·1129					
		18. 22	·1125					
		19. 5	·1122					
		19. 30:	·1115					
		20. 2	·1118					
		21. 1	·1113					
		21. 9	·1111					
		21. 42	·1112					
		22. 13	·1102					
		22. 25	·1102					
		22. 35	·1104					
			(†)					
Jan. 3		Jan. 3		Jan. 3		Jan. 3		
	(†)		(†)	0. 0	·02508	1. 0	44 ·0	46 ·0
1. 30	21. 1. 0	0. 3	·1101	1. 24	·02516	3. 0	45 ·8	46 ·5
2. 36	1. 5	0. 12	·1104	2. 57	·02489	9. 0	45 ·5	46 ·8
2. 59	1. 50	2. 32	·1122	3. 59	·02449	21. 0	43 ·0	45 ·0
3. 22	21. 0. 25	3. 33	·1121	9. 34:	·02253			
4. 13	20. 59. 45	3. 43	·1119	18. 19	·02481			
4. 30	58. 30	3. 57	·1122	21. 3	·02498			
7. 0	59. 45	4. 12	·1119	23. 0	·02561			
9. 2	57. 45	6. 44	·1118	23. 59	·02550			
10. 56	56. 50	7. 45	·1121					
11. 25	54. 35	8. 12	·1121					
12. 20	56. 35	9. 13	·1117					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

January 2. The Declination Magnet was under adjustment during a portion of this day.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 3		Jan. 3						
h m	° ′ ″	h m		h m		h m	°	°
14. 33	20. 57. 55	10. 47	·1118					
15. 13	56. 55	11. 1	·1127					
15. 23	57. 10	11. 48	·1119					
15. 40	56. 15	13. 30	·1120					
16. 0	57. 20	15. 44	·1121					
16. 18	56. 10	16. 2	·1118					
17. 10	58. 15	18. 24	·1118					
18. 15	56. 45	18. 41	·1121					
18. 30	57. 5	20. 52	·1114					
19. 0	57. 30	21. 2	·1117					
19. 4	57. 5	21. 11	·1113					
19. 55	58. 10	22. 36	·1114					
20. 32	58. 10	23. 5	·1114					
21. 15	57. 40	23. 47	·1102					
22. 51	20. 58. 30		(†)					
23. 3	21. 0. 50							
23. 59	20. 58. 15							
Jan. 4		Jan. 4		Jan. 4		Jan. 4		
0. 0	20. 58. 15		(†)	0. 0	·02550	1. 0		47 ·0
0. 27	21. 0. 55	3. 0	·1089*	1. 55	·02488	3. 0	48 ·3	48 ·0
0. 41	0. 50	3. 8	·1087	3. 0	·02424	9. 0	46 ·5	47 ·8
1. 32	2. 50	4. 51	·1092	3. 6	·02437	22. 5	42 ·2	45 ·0
2. 27	21. 2. 20	5. 25	·1091	6. 7	·02180			
3. 30	20. 59. 45	8. 56	·1099		·02225			
4. 54	58. 20	9. 26	·1098	6. 23	·02218			
8. 52	58. 10	11. 8	·1100		·02403			
9. 10	56. 5	12. 13	·1107	9. 50:	·02370			
9. 40	56. 0	13. 22	·1107	12. 36	·02454			
10. 7	54. 50	13. 28	·1109	18. 47	·02691			
10. 15	55. 30	13. 31	·1105	19. 38	·02693			
10. 20	55. 20	13. 52	·1109	22. 54	·02792			
11. 43	56. 50	14. 27	·1106	23. 59	·02709			
12. 10	55. 10	14. 59	·1107					
12. 49	56. 25	15. 16	·1110					
12. 55	55. 30	15. 47	·1109					
13. 7	56. 45	18. 50	·1115					
13. 25	55. 30	19. 0	·1125					
14. 21	57. 25	19. 2	·1118					
14. 50	56. 25	19. 10	·1121					
15. 48	57. 55	19. 43	·1077					
17. 11	57. 50	20. 40	·1116					
18. 35	20. 57. 15	20. 57	·1108					
19. 5	21. 12. 40	21. 3	·1109					
19. 19	9. 40	21. 23	·1121					
19. 52	21. 11. 30	22. 7	·1118					
20. 32	20. 59. 0	22. 40	·1114					
20. 38	20. 58. 55		(†)					
20. 50	21. 0. 35							
23. 59	0. 0							
Jan. 5		Jan. 5		Jan. 5		Jan. 5		
0. 0	21. 0. 0		(†)	0. 0	·02709	8. 34	46 ·0	47 ·8
0. 28	0. 20	5. 5	·1108	1. 18	·02690	21. 0	39 ·5	42 ·8
0. 36	21. 0. 50	5. 35	·1086	4. 39	·02493			
0. 55	20. 59. 45	5. 55	·1089	5. 32	·02448			
4. 26	20. 58. 55	6. 14	·1087	11. 16:	·02345			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 5		Jan. 5		Jan. 5				
h m	° ′ ″	h m		h m		h m	°	°
5. 28	21. 1. 5	6. 47	·1089	17. 2	·02618			
5. 48	20. 58. 55	7. 28	·1100	21. 34	·02830			
6. 8	21. 1. 0	7. 40	·1098	23. 59	·02857			
6. 28	20. 59. 0	7. 48	·1098					
6. 39	59. 55		(†)					
7. 8	56. 50	8. 17	·1104					
7. 48	58. 20	8. 24	·1099					
9. 15	56. 0	8. 33	·1105					
11. 4	56. 20		***					
12. 37	57. 35	9. 19	·1102					
18. 30	20. 57. 55	9. 26	·1105					
22. 16:	21. 1. 0	9. 30	·1103					
22. 45	0. 0	9. 40	·1109					
23. 12	1. 30	9. 55	·1101					
23. 59	0. 35	10. 31	·1109					
		10. 40	·1104					
		11. 43	·1104					
		12. 2	·1097					
		12. 19	·1102					
		12. 26	·1097					
		12. 32	·1099					
		13. 0	·1098					
		13. 22	·1102					
		13. 45	·1101					
		14. 15	·1102					
		14. 25	·1100					
		14. 48	·1104					
		14. 57	·1102					
		15. 8	·1104					
		15. 21	·1103					
		15. 55	·1104					
		16. 2	·1103					
		16. 22	·1106					
		16. 33	·1104					
		21. 41	·1106					
		22. 5	·1103					
			(†)					
Jan. 6				Jan. 6		Jan. 6		
0. 0	21. 0. 35			0. 0	·02857	1. 0		44 ·3
1. 7	2. 30			1. 37	·02819	3. 0		46 ·3
1. 19	2. 0			3. 1	·02736	9. 0	44 ·0	46 ·0
2. 27	21. 1. 25			6. 20:	·02450	21. 0	41 ·8	43 ·8
5. 17	20. 59. 20			10. 16	·02404			
7. 5	58. 0			10. 38	·02440			
7. 17	58. 30			13. 23	·02483			
8. 45	57. 25			18. 30	·02600			
9. 15	57. 35			19. 50	·02594			
9. 41	56. 35			22. 49	·02638			
12. 21:	57. 10			23. 59	·02643			
15. 45	59. 30							
16. 28	58. 45							
16. 36	59. 20							
16. 41	58. 50							
17. 29:	58. 50							
17. 43	59. 40							
18. 18	20. 58. 40							
18. 57	21. 1. 0							
	***							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

January 4. At noon the Horizontal Force Magnet was displaced, and the annual examination of its adjustments were begun.

January 6 and 7. The Horizontal Force Magnet was under adjustment.

Greenwich Mean Solar Time.	Western Declination.
Jan. 6	
h m	° ′ ″
19. 48	20. 59. 10
	***
20. 53	58. 10
20. 57	58. 45
21. 18	58. 0
21. 24	56. 55
21. 40	59. 55
21. 46	20. 58. 40
22. 20	21. 0. 30
22. 30	20. 59. 20
22. 55	59. 40
23. 6	20. 58. 40
23. 19	21. 0. 20
23. 27	20. 59. 40
23. 33	59. 40
23. 50	20. 59. 40
23. 59	21. 0. 10
Jan. 7	
0. 0	21. 0. 10
1. 7	0. 45
2. 21	21. 0. 30
4 21	20. 57. 50
6. 12	57. 55
6. 44	57. 15
7. 8	57. 35
8. 18	56. 55
12. 45	56. 15
15. 18	20. 57. 45
15. 40	21. 0. 10
15. 55	20. 59. 20
16. 15	57. 10
16. 28	56. 40
16. 34	57. 0
16. 44	56. 30
16. 56	57. 25
17. 10	56. 35
19. 45	57. 40
21. 14	20. 56. 55
23. 59	21. 2. 35
Jan. 8	
0. 0	21. 2. 35
0. 11	6. 30
0. 16	5. 20
0. 33	5. 30
0. 48	2. 5
1. 5	3. 0
1. 23	1. 40
1. 54	1. 30
2. 45	21. 2. 50
3. 43	20. 58. 50
4. 47	59. 10
5. 29	57. 20
6. 9	58. 35
7. 46	57. 0
10. 3	55. 35
10. 19	56. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 7	
h m	
1. 23	·1050
3. 0	·1046
3. 21	·1049
6. 15	·1052
6. 30	·1048
7. 10	·1054
10. 32	·1059
10. 43	·1040
14. 57	·1066
15. 30	·1064
16. 15	·1071
16. 31	·1070
18. 16	·1073
20. 1	·1067
20. 17	·1062
20. 32	·1063
22. 8	·1049
23. 8	·1053
23. 59	·1048
Jan. 8	
0. 0	(†)
1. 0	·0958*
1. 22	·0956
1. 59	·0959
2. 53	·0951
3. 37	·0960
	***
5. 27	·0958
5. 45	·0964
	***
7. 25	·0968
7. 44	·0967
8. 30	·0972
13. 43	·0973
	***
15. 37	·0978
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 7	
h m	
0. 0	·02643
2. 42	·02476
4. 29	·02297
4. 38	·02308
5. 6	·02287
5. 24	·02305
9. 44	·02270
12. 26	·02282
17. 35	·02520
22. 49	·02696
23. 59	·02690
Jan. 8	
0. 0	·02690
0. 5	·02680
	·02608
1. 43	·02434
5. 10	·02014
6. 49	·02055
7. 46	·02046
8. 3	·02102
10. 48:	·02136
17. 34:	·02672
20. 59	·02800
22. 36	·02780
	·02728
23. 59	·02730

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 7		
h m	°	°
1. 0	49 ·0	46 ·3
3. 0	50 ·0	48 ·8
9. 0	49 ·3	50 ·2
21. 0	46 ·5	47 ·8
22. 0	47 ·3	48 ·6
23. 0	48 ·5	49 ·3
Jan. 8		
0. 0	49 ·3	50 ·2
1. 0	51 ·0	50 ·8
2. 0	52 ·1	51 ·9
3. 0	52 ·7	53 ·0
6. 0	53 ·0	53 ·0
9. 0	52 ·2	52 ·8
12. 0	51 ·0	51 ·8
18. 0	46 ·5	48 ·6
21. 0	47 ·0	49 ·3
22. 0	47 ·8	49 ·7
23. 0	48 ·5	50 ·0

Greenwich Mean Solar Time.	Western Declination.
Jan. 8	
h m	° ′ ″
14. 5	20. 56. 30
14. 44	58. 30
15. 6	56. 50
15. 22	57. 20
15. 43	56. 0
17. 27	55. 55
17. 30	56. 55
17. 38	56. 0
18. 18	55. 50
20. 39	56. 0
21. 43	58. 0
	(†)
Jan. 9	
	(†)
1. 0	21. 2. 11*
6. 31	20. 57. 55
7. 34	58. 10
11. 38	58. 5
13. 28	59. 30
15. 48	58. 40
16. 50	58. 0
19. 51	57. 30
20. 45	57. 10
	(†)
21. 0	56. 9*
Jan. 10	
1. 0	21. 0. 51*
3. 0	21. 0. 51*
9. 0	20. 56. 50*
21. 0	57. 12*
Jan. 11	
0. 0	21. 1. 40
1. 13	2. 35
2. 27	2. 0
3. 11	21. 0. 35
4. 45	20. 58. 40
	***
6. 57	58. 30
7. 12	57. 30
7. 42:	59. 0
8. 42	53. 15
8. 58	54. 35
9. 4	56. 30
9. 18	54. 50
9. 45	56. 0
10. 24	51. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 8	
h m	
16. 46	·0977
	***
18. 1	·0981
19. 35	·0973
19. 52	·0974
20. 53	·0967
21. 15	·0968
	***
22. 53	·0957
	***
23. 45	·0959
	(†)
Jan. 9	
	(†)
3. 0	·0894*
9. 0	·0902*
18. 3	·0906
20. 0	·0910
21. 11	·0907
21. 41	·0906
22. 35	·0896
23. 23	·0892
23. 43	·0896
	(†)
Jan. 10	
1. 0	·0899*
3. 0	·0902*
9. 0	·0907*
21. 0	·0911
Jan. 11	
1. 0	·0896*
3. 0	·0911
9. 0	·0901*
22. 10	·0907*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 9	
h m	
0. 0	·02730
1. 37	·03005
3. 12	·02922
9. 4:	·02477
13. 28	·02322
	(†)
18. 23	·02273
22. 1	·02252
22. 22	·02270
23. 22	·02253
23. 59	·02204
Jan. 10	
0. 0	·02204
0. 26	·02210
	·02296
2. 19	·02178
4. 28	·02221
10. 2	·02224
12. 43:	·02297
14. 29	·02472
17. 48	·02703
20. 19	·02816
21. 57	·02823
23. 47	·02782
23. 59	·02784
Jan. 11	
0. 0	·02784
1. 36	·02784
3. 14	·02732
6. 6:	·02543
8. 1	·02482
11. 27	·02478
14. 5:	·02579
19. 43	·03010
20. 55	·02969
23. 59	·02950

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 9		
h m	°	°
0. 0	49 ·2	50 ·2
1. 0	50 ·0	50 ·7
3. 0	52 ·3	52 ·5
9. 0	54 ·8	54 ·8
21. 0	54 ·0	55 ·0
Jan. 10		
1. 0	56 ·0	56 ·0
3. 0	57 ·0	57 ·5
9. 0	54 ·5	56 ·5
21. 0	53 ·0	53 ·8
Jan. 11		
1. 0	54 ·0	54 ·2
3. 0	54 ·0	54 ·8
9. 0	51 ·4	53 ·0
22. 10	44 ·8	47 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

January 8. The adjustments of the Horizontal Force Magnet were so altered that the spot of light fell on the paper, at about 0·0098 parts of the force farther from the Declination Photographic Trace. To connect the preceding series with that of this day, it is necessary to reduce them by 0·0098.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 11								
h m	° ′ ″	h m		h m		h m	°	°
10. 45	20. 53. 10							
11. 0	50. 40							
11. 37	53. 30							
11. 43	52. 10							
12. 6	51. 25							
12. 22	49. 45							
12. 30	50. 40							
12. 33	51. 25							
13. 27	54. 40							
13. 57	53. 5							
14. 16	54. 40							
14. 42	54. 30							
14. 58	55. 20							
15. 11	54. 40							
15. 29	55. 10							
15. 47	54. 0							
16. 6	54. 30							
16. 41	57. 5							
17. 3	20. 55. 0							
	***							
19. 8	21. 0. 10							
19. 40	20. 58. 10							
20. 15	58. 20							
20. 31	20. 56. 50							
21. 16	21. 0. 50							
21. 36	20. 59. 20							
22. 34	21. 0. 30							
23. 26	2. 10							
23. 59	1. 40							
Jan. 12		Jan. 12		Jan. 12		Jan. 12		
0. 0	21. 1. 20		(†)	0. 0	·02950	8. 0	47 ·8	49 ·3
0. 12	3. 10	0. 49	·0910	3. 3	·02968	21. 0	46 ·8	48 ·6
1. 8	3. 45	1. 41	·0916	8. 15	·02846			
1. 32	3. 15	2. 3	·0919	12. 16	·02700			
1. 53	4. 10	2. 14	·0917	18. 7	·02666			
2. 38	2. 5	3. 23	·0926	20. 28	·02692			
3. 18	21. 2. 25	4. 13	·0924	23. 59	·02790			
4. 18	20. 59. 50	4. 41	·0928					
5. 38	59. 35	5. 30	·0928					
6. 19	58. 0	5. 47	·0924					
7. 5	58. 50	6. 47	·0924					
7. 58	58. 0	7. 0	·0921					
8. 12	57. 55	7. 51	·0920					
8. 22	58. 10	8. 19	·0924					
8. 30	57. 40	8. 27	·0921					
8. 51	57. 55	8. 44	·0922					
9. 3	57. 25	9. 0	·0918					
9. 13	57. 50	9. 15	·0920					
11. 9	54. 50	10. 10	·0915					
11. 49	57. 10	10. 44	·0920					
12. 13	56. 25		***					
12. 23	57. 10	12. 10	·0910					
12. 36	56. 30	13. 31	·0915					
13. 16	58. 40	14. 44	·0914					
14. 0	58. 45	15. 0	·0910					
15. 3	57. 10	16. 31	·0917					
15. 22	58. 30	19. 59	·0915					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 12		Jan. 12						
h m	° ′ ″	h m		h m		h m	°	°
15. 37	20. 57. 35	20. 31	·0911					
15. 46	57. 55	22. 39	·0905					
16. 11	57. 30	23. 30	·0915					
16. 34	57. 55	23. 38	·0913					
17. 11	57. 20	23. 59	·0915					
19. 52	56. 40							
20. 43	55. 35							
21. 23	56. 5							
22. 30	58. 35							
22. 36	20. 58. 10							
22. 53	21. 0. 40							
23. 0	0. 40							
23. 15	2. 55							
23. 29	2. 10							
23. 59	4. 30							
Jan. 13		Jan. 13		Jan. 13		Jan. 13		
0. 0	21. 4. 30	0. 0	·0915	0. 0	·02790	1. 0	47 ·0	48 ·4
0. 11	5. 20	0. 41	·0917	2. 36	·02817	3. 0	46 ·0	48 ·0
1. 17	6. 35		(†)	3. 17	·02783	9. 0	48 ·8	50 ·2
1. 31	8. 20	1. 0	·0918*	5. 28	·02622	21. 0	45 ·0	47 ·3
1. 52	4. 5	2. 2	·0914	7. 48	·02548			
2. 11	3. 50	2. 42	·0922	9. 43	·02520			
2. 38	6. 40		***	10. 2	·02501			
3. 11	6. 0	4. 26	·0921	13. 16	·02465			
3. 26	6. 20		***	13. 48	·02490			
4. 11	3. 15	6. 7	·0920	15. 32	·02488			
4. 52	5. 55		***	16. 38	·02577			
5. 40	4. 15	6. 22	·0926	19. 49	·02712			
5. 48	5. 0		***	23. 59	·02830			
6. 5	4. 20	7. 17	·0905					
6. 33	6. 55	7. 32	·0912					
7. 9	6. 10	7. 54	·0901					
7. 24	1. 50	8. 13	·0908					
7. 37	21. 3. 35	8. 23	·0891					
7. 59	20. 59. 50	8. 32	·0895					
8. 4	21. 0. 50	8. 52	·0883					
8. 9	0. 25	9. 3	·0888					
8. 15	21. 2. 20	9. 17	·0884					
8. 32	20. 54. 45	9. 19	·0881					
8. 39	57. 0	9. 45	·0903					
9. 0	46. 20	10. 8	·0885					
9. 21	46. 35	10. 58	·0898					
9. 41	41. 0	11. 22	·0891					
9. 54	44. 45	11. 39	·0898					
10. 4	44. 25	12. 15	·0896					
10. 10	45. 10	12. 30	·0902					
10. 18	44. 25	12. 42	·0899					
10. 57	49. 25	13. 8	·0909					
11. 15	49. 10	13. 37	·0888					
11. 39	55. 0	13. 52	·0899					
11. 48	54. 25	14. 15	·0902					
12. 2	55. 20		***					
12. 10	54. 50	14. 52	·0901					
12. 33	58. 50	15. 13	·0895					
13. 24	51. 25	15. 33	·0915					
13. 27	53. 0	16. 0	·0915					
13. 40	51. 50	16. 29	·0909					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

January 9. Workmen had been engaged in the Observatory, and by some means caused the spot of light of the Horizontal Force Magnet to be removed on the Photographic sheet 0·0060 still farther from the Declination Trace. Therefore the series up to January 7 needs reducing by 0·0158, and on January 8 by 0·0060 to reduce the numbers to those of the following series.

January 10. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

January 11. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.
Jan. 13 h m	° ′ ″
14. 0	20. 56. 20
14. 13	57. 50
14. 26	58. 15
14. 55	59. 20
15. 3	20. 59. 0
15. 10	21. 0. 30
15. 40	20. 50. 20
15. 55	51. 0
16. 10	56. 0
	***
17. 33	58. 50
17. 42	58. 0
17. 49	59. 0
17. 57	58. 20
19. 36	57. 50
19. 45	58. 55
19. 55	57. 45
20. 1	58. 5
20. 10	57. 50
20. 46	20. 58. 0
	***
23. 7	21. 4. 10
23. 33	4. 0
23. 37	2. 55
23. 52	2. 0
23. 59	2. 15
Jan. 14	
0. 0	21. 2. 15
0. 45	3. 55
3. 43	0. 55
3. 50	21. 0. 15
4. 57	20. 59. 0
5. 48	21. 0. 40
6. 42	20. 59. 0
7. 18	21. 0. 45
	***
10. 19	20. 57. 25
10. 28	58. 40
10. 38	58. 25
11. 57	29. 20
12. 16	45. 25
12. 23	44. 40
12. 58	20. 57. 45
13. 10	21. 0. 10
13. 55	20. 53. 35
14. 7	57. 0
14. 52	41. 50
15. 22	48. 20
15. 28	48. 0
15. 44	49. 35
16. 7	55. 50
16. 14	56. 0
16. 28	59. 30
16. 35	57. 30
17. 8	55. 40
	***
18. 2	59. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 13 h m	
17. 24	·0915
	***
19. 23	·0909
19. 25	·0905
19. 40	·0912
19. 50	·0908
20. 0	·0912
	***
22. 0	·0897
22. 32	·0894
23. 32	·0894
	(†)
Jan. 14 h m	
0. 4	·0895
0. 36	·0905
2. 14	·0915
2. 28	·0912
3. 43	·0916
4. 0	·0924
4. 19	·0918
4. 33	·0921
5. 4	·0918
5. 21	·0922
5. 51	·0912
6. 2	·0917
6. 24	·0913
7. 8	·0911
8. 45	·0918
8. 55	·0912
9. 5	·0915
9. 32	·0916
9. 35	·0922
9. 54	·0918
10. 5	·0921
10. 15	·0904
10. 31	·0914
10. 39	·0913
10. 52	·0937
11. 10	·0916
11. 23	·0924
12. 16	·0872
12. 47	·0902

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
m	
Jan. 14	
0. 0	·02830
1. 23	·02849
6. 38:	·02408
10. 12	·02304
10. 47	·02311
11. 0	·02290
11. 50	·02257
12. 35	·02340
14. 4	·02376
15. 15	·02380
18. 28	·02545
23. 59	·02720

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 14		
1. 0	46·8	48·7
3. 0	49·0	51·0
9. 0	48·3	50·2
21. 0	44·0	47·0
22. 0	44·8	47·0
23. 0	45·2	47·1

Greenwich Mean Solar Time.	Western Declination.
Jan. 14 h m	° ′ ″
18. 16	20. 58. 30
18. 57	58. 5
19. 29	58. 35
	***
21. 3	20. 56. 10
	***
23. 59	21. 2. 20
Jan. 15	
0. 0	21. 2. 20
0. 9	2. 10
0. 53	3. 20
1. 44	2. 20
1. 55	2. 50
3. 24	1. 0
4. 15	1. 35
5. 15	21. 4. 35
5. 45	20. 47. 40
6. 13	20. 57. 50
6. 30	21. 2. 20
6. 38	20. 59. 0
6. 44	21. 1. 45
6. 56	20. 54. 40
7. 3	20. 53. 45
7. 21	21. 11. 0
7. 35	21. 7. 20
7. 53	20. 58. 40
8. 5	53. 30
8. 10	56. 30
8. 21	54. 0
8. 43	56. 0
8. 53	53. 50
9. 0	55. 0
9. 9	55. 0
9. 15	53. 20
9. 18	53. 30
9. 29	50. 0
9. 34	51. 40
9. 41	46. 20
9. 46	48. 30
9. 58	43. 0
10. 15	53. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 14 h m	
13. 0	·0901
13. 23	·0907
14. 1	·0901
14. 24	·0910
14. 43	·0925
14. 48	·0924
15. 0	·0936
15. 25	·0909
15. 41	·0914
16. 13	·0909
16. 27	·0913
16. 37	·0910
	***
17. 44	·0917
	***
20. 15	·0917
21. 1	·0911
21. 9	·0912
	***
22. 2	·0905
23. 26	·0911
23. 43	·0909
23. 59	·0912
Jan. 15	
	(†)
1. 0	·0916*
1. 17	·0920
1. 32	·0923
1. 45	·0921
1. 57	·0924
3. 7	·0924
3. 22	·0915
3. 52	·0921
3. 57	·0930
4. 18	·0921
4. 45	·0921
4. 57	·0915
5. 3	·0919
5. 29	·0905
5. 37	·0913
5. 43	·0902
5. 51	·0907
6. 6	·0893
6. 8	·0895
6. 17	·0886
6. 26	·0890
6. 38	·0872
6. 42	·0885
6. 52	·0878
7. 15	·0908
7. 16	·0907
7. 36	·0869
7. 48	·0876
7. 57	·0863
8. 6	·0872
8. 13	·0861
8. 22	·0867

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 15	
0. 0	·02720
1. 24	·02728
5. 39	·02498
6. 23	·02596
7. 25	·02600
7. 43	·02680
8. 26	·02647
9. 24	·02630
9. 45	·02557
10. 11	·02546
11. 14	·02602
11. 47	·02562
12. 57	·02646
14. 2	·02666
15. 8	·02720
16. 11	·02735
16. 27	·02772
16. 41	·02760
17. 11	·02762
18. 8	·02859
20. 34	·02946
21. 9	·02929
22. 55	·02932
	·02783
23. 59	·02829

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 15		
0. 0	45·8	47·3
1. 0	46·5	48·0
2. 0	47·0	48·6
3. 0	47·5	48·8
6. 0	46·0	47·8
9. 0	44·0	47·0
12. 0	43·0	45·6
18. 0	39·0	42·6
21. 0	39·8	43·0
22. 0	40·0	43·0
23. 0	40·5	43·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	Readings of Thermometers. (Of V. F. Magnet.)
Jan. 15		Jan. 15						
h m	° ′ ″	h m		h m		h m	°	°
10. 22	20. 53. 20	8. 38	·0868					
10. 31	55. 25	8. 42	·0864					
10. 43	55. 0	9. 0	·0879					
11. 5	49. 0		***					
11. 12	49. 30	9. 27	·0880					
11. 13	51. 30	9. 45	·0912					
11. 22	48. 10	9. 52	·0888					
11. 30	38. 10	10. 0	·0892					
11. 51	41. 20	10. 3	·0888					
11. 57	44. 30	10. 8	·0889					
12. 3	44. 30	10. 22	·0871					
12. 10	46. 20	10. 32	·0870					
13. 6	39. 55	10. 45	·0879					
13. 44	42. 30	10. 52	·0874					
13. 51	43. 30	10. 57	·0883					
14. 10	43. 45	11. 6	·0883					
14. 26	43. 20	11. 21	·0902					
15. 3	46. 40	11. 32	·0888					
15. 7	46. 35	11. 37	·0894					
15. 20	49. 55	11. 45	·0893					
15. 35	49. 45	11. 53	·0883					
15. 48	56. 40	11. 58	·0887					
16. 12	20. 49. 20	12. 8	·0875					
16. 40	21. 0. 20	12. 13	·0878					
16. 47	21. 0. 25	12. 23	·0873					
16. 54	20. 57. 30	12. 55	·0891					
17. 9	58. 35	13. 6	·0887					
17. 25	20. 56. 10	13. 25	·0886					
17. 44	21. 0. 0	13. 43	·0892					
18. 20	2. 50	13. 51	·0890					
18. 45	0. 20	13. 54	·0892					
19. 19	8. 25	14. 20	·0887					
19. 30	10. 40	14. 46	·0895					
19. 43	7. 0	15. 10	·0890					
	***	15. 25	·0898					
20. 29	3. 20	15. 39	·0901					
20. 40	21. 4. 10	15. 52	·0895					
21. 22	20. 53. 30	16. 10	·0904					
22. 7	21. 4. 10	16. 23	·0897					
22. 16	2. 10	16. 53	·0923					
	***	17. 45	·0896					
23. 12	4. 35	18. 30:	·0910					
23. 14	3. 30		***					
23. 26	6. 30	19. 9	·0901					
23. 30	4. 30	19. 28	·0918					
23. 35	7. 0		***					
23. 49	4. 5	20. 7	·0902					
23. 59	4. 25	20. 15	·0906					
		20. 30	·0899					
		20. 44	·0904					
			***					
		20. 52	·0899					
		21. 1	·0902					
		21. 7	·0898					
		21. 17	·0906					
		21. 38	·0919					
		21. 46	·0917					
		21. 53	·0920					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	Readings of Thermometers. (Of V. F. Magnet.)
		Jan. 15						
h m	° ′ ″	h m		h m		h m	°	°
		21. 58	·0913					
		22. 6	·0919					
		22. 16	·0910					
		23. 9	·0901					
		23. 23	·0908					
		23. 29	·0902					
		23. 37	·0909					
			(†)					
Jan. 16		Jan. 16		Jan. 16		Jan. 16		
0. 0	21. 4. 25		(†)	0. 0	·02829	0. 0	41 ·2	43 ·8
0. 14	6. 55	0. 46	·0909	0. 56	·02802	1. 0	41 ·9	44 ·5
1. 7	2. 0	1. 12	·0906	1. 9	·02810	2. 0	42 ·5	45 ·5
1. 22	4. 25	1. 22	·0914	3. 11	·02677	3. 0	43 ·3	46 ·2
1. 40	5. 0	1. 50	·0905	9. 23:	·02298	9. 0	42 ·0	42 ·3
1. 58	3. 0	2. 0	·0908	13. 39	·02440	21. 0	33 ·1	37 ·5
2. 4	1. 50	2. 7	·0905	19. 3	·02878			
2. 14	2. 0	2. 23	·0910	23. 30	·02903			
2. 39	21. 0. 20		(†)		(†)			
3. 40	20. 59. 45	2. 54	·0913					
3. 47	21. 0. 20	3. 4	·0917					
4. 26	20. 59. 40	3. 22	·0916					
5. 1	57. 55	3. 32	·0913					
5. 18	57. 0	3. 39	·0916					
5. 57	53. 40	3. 56	·0910					
6. 18	57. 40	4. 4	·0912					
6. 27	57. 30	4. 44	·0900					
6. 39	54. 30	5. 0	·0907					
6. 48	53. 50	5. 8	·0903					
7. 3	49. 55		***					
7. 11	50. 0	5. 52	·0901					
7. 22	52. 55	6. 22	·0911					
7. 35	55. 10	6. 37	·0907					
7. 49	55. 50	6. 41	·0909					
7. 58	54. 50	7. 0	·0905					
8. 10	56. 55	7. 19	·0918					
8. 33	57. 50	7. 24	·0915					
8. 45	57. 30	7. 46	·0917					
9. 0	58. 0	7. 53	·0915					
10. 37	56. 55	8. 8	·0918					
10. 57	55. 55	8. 37	·0912					
11. 52	57. 50	9. 21	·0917					
12. 18:	20. 57. 25	10. 24	·0915					
13. 0	21. 0. 20	10. 38	·0920					
13. 30	0. 40	10. 56	·0919					
13. 45	0. 0	11. 11	·0922					
14. 4	0. 10	11. 23	·0919					
14. 12	1. 0	11. 29	·0920					
14. 15	21. 0. 20	11. 38	·0916					
14. 40	20. 59. 40	11. 49	·0921					
15. 19	21. 0. 20	12. 6	·0918					
15. 48	20. 59. 0	12. 25	·0921					
16. 0	59. 45	12. 35	·0916					
16. 8	59. 0	12. 44	·0920					
16. 36	59. 35	12. 52	·0919					
16. 57	58. 50	13. 1	·0922					
17. 11	59. 30	14. 45	·0928					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 16		Jan. 16						
h m	° ′ ″	h m		h m		h m	°	°
18. 17	20. 58. 0	15. 0	·0926					
18. 28	58. 35	15. 16	·0930					
18. 36	57. 20	17. 37	·0933					
18. 44	58. 5	17. 48	·0932					
20. 0	56. 55	18. 31	·0935					
20. 29	55. 20	18. 37	·0933					
20. 36	56. 15	18. 47	·0936					
20. 45	20. 55. 30	19. 51	·0933					
23. 45	21. 1. 15	19. 55	·0936					
23. 56	2. 50	20. 6	·0932					
23. 59	2. 10		***					
		20. 35	·0929					
		20. 41	·0931					
		20. 55	·0925					
		22. 24	·0917					
		23. 16	·0909					
		23. 39	·0907					
		23. 55	·0911					
		23. 59	·0910					
Jan. 17		Jan. 17		Jan. 17		Jan. 17		
0. 0	21. 2. 10	0. 0	·0910		(†)	1. 0	37 ·0	40 ·0
1. 24	2. 40	0. 8	·0907	0. 28	·02875	3. 0	40 ·0	41 ·8
2. 54	1. 25	0. 41	·0907	3. 4	·02700	9. 32	39 ·0	41 ·0
3. 7	1. 50	2. 10	·0918	5. 14	·02464	21. 0	32 ·5	36 ·0
3. 15	21. 1. 0	3. 3	·0928	10. 8:	·02284			
4. 49	20. 57. 40	3. 20	·0926	19. 20	·02695			
5. 22	58. 5	3. 30	·0928	21. 36	·02866			
5. 51	57. 0	3. 50	·0927	23. 21	·02827			
6. 54	57. 15	4. 38	·0930	23. 59	·02810			
8. 0	57. 25	4. 47	·0929					
8. 27	54. 30	5. 22	·0927					
9. 0	56. 50	5. 31	·0923					
10. 17	56. 30	5. 46	·0927					
12. 39	57. 45	6. 37	·0929					
14. 56	58. 0	6. 58	·0927					
15. 51	59. 40	8. 11	·0928					
20. 19	56. 50	9. 9	·0933					
21. 24	57. 30	15. 53	·0941					
22. 15	20. 59. 20	17. 38	·0941					
22. 45	21. 1. 30	20. 13	·0937					
23. 8	2. 0	21. 0	·0932					
23. 51	3. 0	23. 3	·0925					
23. 59	2. 30	23. 8	·0928					
		23. 30	·0927					
			(†)					
Jan. 18		Jan. 18		Jan. 18		Jan. 18		
0. 0	21. 2. 35		(†)	0. 0	·02810	1. 0	37 ·5	39 ·0
0. 21	1. 55	1. 0	·0932*	2. 12:	·02624	3. 0	41 ·5	42 ·2
0. 32	2. 40	2. 3	·0932	4. 37	·02197	9. 0	41 ·0	42 ·5
1. 38	21. 1. 20	3. 1	·0928	6. 0	·02026	22. 12	31 ·5	35 ·0
2. 40	20. 59. 0	4. 7	·0935	11. 10	·02050			
3. 18	59. 50	4. 17	·0934	16. 5:	·02288			
4. 46	58. 0	4. 58	·0926	20. 41	·02628			
5. 32	56. 40	5. 37	·0929	22. 8	·02760			
6. 15	57. 50	5. 53	·0927	23. 59	·02970			
6. 27	57. 15	7. 58	·0933					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 18		Jan. 18						
h m	° ′ ″	h m		h m		h m	°	°
9. 23	20. 56. 45	10. 57	·0931					
10. 7	56. 0	11. 8	·0931					
10. 32	56. 40	11. 27	·0931					
10. 57	54. 25		(†)					
	***	22. 12	·0928*					
13. 24	58. 25							
14. 44	58. 40							
16. 25	58. 35							
20. 16	56. 50							
20. 45	55. 0							
23. 59	59. 15							
Jan. 19		Jan. 19		Jan. 19		Jan. 19		
0. 0	20. 59. 15	0. 0	·0930	0. 0	·02970	9. 0	36 ·4	38 ·9
1. 12	21. 1. 30	0. 36	·0929	0. 28:	·02987	21. 0	35 ·0	37 ·5
2. 0	21. 1. 20	4. 39	·0938	5. 48	·02640			
3. 53	20. 58. 55	7. 35	·0946	8. 53	·02520			
5. 9	57. 30	8. 49	·0942	14. 9	·02475			
10. 6	57. 0	9. 28	·0944	19. 52	·02546			
14. 38	58. 30	18. 22	·0944	22. 30	·02580			
17. 45	57. 20	18. 55	·0945	23. 59	·02543			
18. 15	57. 20	19. 58	·0946					
19. 7	58. 20	20. 43	·0940					
19. 20	57. 45	21. 1	·0939					
19. 37	58. 15	21. 51	·0941					
20. 27	56. 50	22. 25	·0935					
21. 28	58. 0	22. 52	·0934					
21. 42	57. 45		(†)					
21. 56	59. 0							
22. 27	20. 59. 0							
23. 59	21. 1. 0							
Jan. 20		Jan. 20		Jan. 20		Jan. 20		
0. 0	21. 1. 0	1. 0	·0933*	0. 0	·02543	1. 0	39 ·0	40 ·4
1. 54	21. 1. 55	3. 0	·0940*	4. 25	·02084	3. 0	41 ·2	41 ·8
2. 47	20. 59. 40	9. 0	·0946*	5. 8	·02116	9. 0	41 ·5	42 ·8
3. 29	58. 30	21. 0	·0941*		·02172	21. 0	37 ·0	40 ·0
7. 33	58. 0			5. 56	·02138			
7. 49	57. 25			9. 54	·02100			
9. 0	57. 50			13. 23	·02159			
10. 45	56. 25				(†)			
10. 54	57. 10			21. 0	·02429*			
	***			21. 30	·02402			
12. 12	56. 50			23. 2	·02422			
12. 22	57. 30			23. 59	·02388			
12. 38	56. 20							
16. 52	57. 35							
17. 0	58. 5							
17. 16	57. 30							
19. 26	57. 10							
21. 12	20. 55. 40							
	***							
23. 59	21. 1. 0							
Jan. 21		Jan. 21		Jan. 21		Jan. 21		
0. 0	21. 1. 0		(†)	0. 0	·02388	1. 0	41 ·0	42 ·0
1. 10	1. 40	1. 0	·0930	3. 29	·02116	3. 0	43 ·0	43 ·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

January 20. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 21		Jan. 21		Jan. 21		Jan. 21		
h m	° ′ ″	h m		h m		h m	°	°
3. 35	21. 0. 0	1. 32	·0929	4. 11	·02150	9. 0	43 ·0	44 ·0
3. 52	20. 59. 10	2. 43	·0932	4. 17	·02247	21. 0	40 ·0	43 ·0
5. 0	21. 0. 15	3. 48	·0927	4. 53	·02226	22. 0	41 ·0	43 ·2
5. 10	20. 59. 40	4. 54	·0931	8. 23	·02233	23. 0	42 ·0	43 ·4
5. 22	59. 55	5. 5	·0934	9. 2	·02266			
5. 31	20. 58. 10	5. 13	·0933	11. 34	·02230			
5. 56	21. 1. 50	5. 23	·0940	11. 50	·02185			
6. 24	2. 40	5. 52	·0919	13. 39	·02180			
6. 49	21. 0. 0	5. 59	·0922	13. 53	·02149			
7. 10	20. 59. 15	6. 11	·0923	14. 42	·02154			
7. 20	20. 58. 10	7. 23	·0946	17. 14	·02343			
7. 42	21. 1. 0	8. 9	·0924	23. 59	·02572			
8. 0	21. 1. 0	8. 23	·0924					
8. 15	20. 58. 45	8. 38	·0909					
8. 25	20. 59. 0	8. 48	·0913					
8. 31	21. 0. 5	9. 0	·0910					
8. 42	20. 55. 30	9. 14	·0911					
8. 56	57. 40	9. 21	·0905					
9. 13	55. 0	9. 38	·0920					
9. 18	55. 45	9. 52	·0914					
9. 37	53. 20	10. 23	·0923					
9. 58	55. 55	10. 51	·0916					
10. 22	55. 40	11. 19	·0916					
10. 55	50. 50	11. 27	·0922					
11. 20	54. 20	11. 37	·0910					
12. 6	35. 20	11. 55	·0906					
12. 33	42. 25	12. 25	·0913					
12. 50	41. 15	12. 42	·0907					
13. 30	49. 25	12. 55	·0912					
13. 41	52. 50	13. 12	·0916					
13. 54	48. 20	13. 25	·0925					
13. 57	48. 0	13. 51	·0900					
14. 14	43. 0	14. 0	·0899					
14. 23	42. 50	14. 17	·0910					
14. 39	37. 0	14. 32	·0902					
14. 57	36. 25	14. 56	·0912					
15. 36	41. 30	15. 6	·0911					
16. 26	52. 25	15. 24	·0919					
16. 47	54. 35	15. 47	·0917					
16. 57	53. 55	16. 4	·0911					
17. 12	54. 10	16. 38	·0907					
17. 24	56. 0	17. 37	·0911					
17. 36	56. 40	18. 2	·0922					
17. 53	54. 30	18. 31	·0918					
18. 5	54. 30	19. 16	·0922					
18. 17	54. 0	20. 7	·0920					
18. 44	56. 0	20. 47	·0912					
19. 13	56. 35	21. 6	·0921					
19. 40	54. 50	21. 38	·0916					
20. 27	56. 5	21. 52	·0918					
20. 54	55. 0	22. 5	·0915					
21. 28	58. 35	22. 22	·0921					
22. 10	20. 59. 40	22. 26	·0918					
22. 17	21. 1. 30	22. 35	·0920					
22. 30	1. 30	22. 41	·0914					
23. 0	2. 55	22. 52	·0916					
23. 10	2. 30	23. 0	·0916					
23. 17	3. 15		(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 21								
h m	° ′ ″	h m		h m		h m	°	°
23. 24	21. 2. 10							
23. 59	4. 55							
Jan. 22		Jan. 22		Jan. 22		Jan. 22		
0. 0	21. 5. 0		(†)	0. 0	·02572	0. 0	42 ·7	44 ·2
0. 12	6. 0	1. 0	·0913*	2. 0:	·02510	1. 0	44 ·0	45 ·2
0. 23	4. 30	1. 23	·0917	4. 7	·02182	3. 0	47 ·0	48 ·0
0. 33	4. 40	1. 38	·0918	7. 16	·02252	6. 0	48 ·5	49 ·5
0. 42	6. 0	2. 17	·0921	8. 15	·02244	9. 0	48 ·0	49 ·3
1. 6	3. 20	2. 28	·0918	8. 29	·02305	18. 0	38 ·8	39 ·3
1. 37	3. 25	2. 52	·0924	10. 10	·02263	21. 0	41 ·8	45 ·0
1. 49	4. 0	3. 16	·0920	14. 42	·02404	22. 0	42 ·7	45 ·0
2. 34	1. 20	3. 25	·0929	15. 17	·02396	23. 0	43 ·5	45 ·0
2. 53	2. 10	3. 35	·0924	17. 15	·02438			
3. 16	1. 40	3. 45	·0926	21. 59	·02807			
	***	4. 8	·0917	23. 59	·02910			
3. 48	3. 40	4. 22	·0922					
4. 7	2. 20	4. 30	·0921					
4. 36	1. 50	5. 8	·0929					
5. 15	2. 50	5. 21	·0918					
5. 27	1. 15	5. 54	·0925					
6. 51	1. 45	6. 8	·0923					
7. 5	0. 30	6. 17	·0924					
7. 39	21. 2. 45	6. 30	·0923					
8. 21	20. 47. 0	6. 38	·0924					
8. 42	56. 50	7. 3	·0920					
8. 56	59. 25	7. 37	·0926					
9. 20	59. 35	7. 39	·0924					
9. 59	58. 0	7. 43	·0924					
10. 48	57. 45	7. 53	·0917					
11. 7	57. 30	8. 2	·0920					
11. 30	58. 0	8. 7	·0920					
12. 27	58. 0	8. 22	·0934					
12. 39	55. 15	8. 39	·0914					
13. 10	20. 54. 45	8. 48	·0919					
13. 48	21. 0. 0	8. 55	·0917					
14. 1	4. 10	9. 35	·0918					
14. 24	1. 0	9. 51	·0922					
14. 33	2. 10	9. 55	·0920					
14. 41	1. 20	10. 37	·0922					
15. 1	2. 30	10. 51	·0925					
15. 19	6. 5	10. 55	·0922					
15. 53	7. 40	11. 4	·0922					
16. 9	7. 40	11. 11	·0928					
16. 28	2. 50		***					
16. 41	5. 40	12. 25	·0925					
16. 51	5. 45	12. 37	·0929					
17. 10	3. 40		***					
17. 24	3. 40	12. 57	·0925					
17. 40	4. 50	13. 0	·0929					
17. 54	8. 20	13. 18	·0927					
18. 1	8. 0	13. 23	·0932					
18. 14	10. 50	13. 31	·0926					
19. 2	21. 2. 5	13. 47	·0929					
19. 33	20. 59. 30	14. 3	·0925					
19. 50	21. 1. 40	14. 30	·0922					
20. 14	21. 1. 55	14. 43	·0923					
20. 35	20. 58. 50	15. 7	·0934					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 22		Jan. 22						
h m	° ′ ″	h m		h m		h m	°	°
20. 43	21. 0. 10	15. 22	·0935					
20. 57	20. 59. 0	15. 36	·0942					
21. 16	20. 59. 0	15. 43	·0936					
21. 35	21. 3. 5	15. 49	·0936					
21. 45	3. 35	16. 12	·0926					
22. 7	2. 0	16. 26	·0933					
22. 20	3. 50	16. 36	·0931					
22. 52	3. 20	17. 0	·0940					
22. 58	4. 20	17. 9	·0940					
23. 10	2. 30	17. 31	·0922					
23. 17	3. 15	17. 52	·0924					
	(†)	17. 58	·0921					
		18. 21	·0909					
		18. 42	·0919					
		18. 53	·0917					
		19. 6	·0922					
		19. 9	·0922					
		19. 22	·0931					
		19. 43	·0926					
		19. 56	·0930					
			***					
		20. 25	·0924					
		20. 31	·0925					
		20. 36	·0923					
		20. 40	·0926					
		21. 26	·0915					
		21. 35	·0919					
		21. 45	·0914					
		21. 54	·0914					
		22. 5	·0919					
		22. 7	·0909					
		22. 20	·0919					
			***					
		22. 54	·0910					
		23. 8	·0913					
		23. 37	·0907					
		23. 59	·0907					
Jan. 23		Jan. 23		Jan. 23		Jan. 23		
	(†)	0. 0	·0906	0. 0	·02910	0. 0	43 ·8	45 ·1
0. 6	21. 3. 0	0. 27	·0912	0. 39	·02869	1. 0	44 ·2	45 ·4
0. 15	3. 10	0. 46	·0908	2. 9	·02862	2. 0	45 ·1	46 ·0
0. 19	5. 10	1. 30	·0916	3. 5	·02820	3. 0	46 ·0	47 ·0
0. 27	5. 25	2. 35	·0918	5. 26	·02641	9. 0	46 ·5	47 ·5
1. 4	4. 10	2. 41	·0918	8. 6	·02560	21. 0	47 ·0	48 ·8
1. 11	4. 45	3. 10	·0921	15. 44	·02691			
3. 0	21. 0. 20	3. 38	·0917	18. 38:	·02790			
3. 28	20. 59. 45	3. 54	·0915	22. 11	·02770			
4. 32	56. 10	4. 7	·0909	23. 59	·02688			
6. 10	58. 25	4. 38	·0918					
7. 0	57. 0	4. 42	·0917					
7. 18	57. 20	5. 8	·0922					
7. 44	54. 45	5. 41	·0918					
8. 10	49. 0	6. 4	·0921					
8. 23	51. 0	6. 19	·0917					
8. 50	47. 0	6. 54	·0921					
9. 16	52. 55	7. 24	·0919					
9. 26	52. 50	7. 37	·0921					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 23		Jan. 23						
h m	° ′ ″	h m		h m		h m	°	°
9. 48	20. 56. 20	8. 8	·0914					
10. 3	57. 10		***					
10. 46	57. 15	8. 20	·0921					
12. 17	58. 30	8. 34	·0915					
13. 6	59. 40	8. 42	·0914					
14. 17	20. 59. 0	8. 52	·0919					
14. 40	21. 0. 25	8. 57	·0917					
15. 13	20. 58. 45	9. 8	·0919					
15. 31	59. 25	9. 20	·0915					
15. 43	58. 40	9. 53	·0922					
16. 13	59. 15	10. 17	·0920					
16. 27	58. 45	10. 31	·0922					
	***		***					
18. 23	58. 40	13. 15	·0921					
	***	15. 2	·0925					
20. 12	57. 40	16. 27	·0924					
21. 0	20. 58. 25	17. 21	·0927					
23. 0	21. 4. 0	17. 38	·0926					
23. 59	3. 0	18. 1	·0927					
		18. 18	·0925					
		18. 37	·0926					
		18. 50	·0924					
		18. 54	·0925					
		19. 32	·0923					
		19. 59	·0924					
		20. 12	·0922					
		20. 30	·0924					
		20. 37	·0923					
		21. 17	·0921					
		23. 22	·0910					
		23. 45	·0911					
			(†)					
Jan. 24		Jan. 24		Jan. 24		Jan. 24		
0. 0	21. 3. 0		(†)	0. 0	·02688	1. 0	51 ·0	51 ·3
0. 37	3. 15	1. 0	·0907*	1. 28	·02563	3. 0	52 ·7	52 ·3
0. 42	2. 30	1. 22	·0909	4. 21	·02237	9. 0	51 ·8	51 ·7
0. 58	3. 20	2. 25	·0913		·02266	21. 0	48 ·5	51 ·0
1. 35	3. 30	2. 26	·0908	6. 23	·02305			
2. 8	2. 15	2. 46	·0910	8. 12	·02296			
2. 45	2. 15	2. 55	·0907	12. 52	·02325			
3. 10	1. 20		***	22. 17	·02600			
3. 43	21. 1. 20	3. 48	·0906	23. 59	·02546			
4. 35	20. 58. 25	4. 10	·0908					
5. 39	21. 0. 35	4. 30	·0906					
6. 5	20. 59. 55	5. 7	·0911					
6. 11	21. 0. 10	5. 27	·0909					
7. 1	20. 58. 30	7. 5	·0914					
7. 11	58. 50	7. 25	·0912					
7. 43	56. 15	7. 39	·0913					
7. 48	54. 45	7. 52	·0921					
8. 0	55. 50	8. 0	·0919					
8. 31	54. 10		***					
9. 24	57. 40	8. 21	·0919					
10. 14	57. 30	8. 38	·0924					
10. 25	56. 35	9. 17	·0918					
10. 43	57. 0	9. 38	·0919					
11. 8	56. 10	9. 57	·0917					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 24		Jan. 24						
h m	° ′ ″	h m		h m		h m	°	°
11. 37	20. 57. 15	10. 9	·0920					
12. 12	56. 50	10. 33	·0916					
12. 36	53. 45	10. 52	·0919					
12. 43	49. 20	11. 15	·0919					
12. 55	52. 15	11. 25	·0916					
13. 16	48. 45	11. 35	·0916					
14. 15	56. 50	11. 40	·0913					
15. 13	58. 0	11. 58	·0919					
15. 27	56. 30	12. 8	·0917					
16. 19	57. 0	12. 21	·0918					
16. 37	57. 55	12. 47	·0907					
	***		***					
18. 6	58. 0	13. 4	·0912					
18. 44	59. 30	13. 10	·0910					
19. 7	58. 0	13. 32	·0917					
19. 24	58. 30	14. 0	·0919					
19. 58	56. 50	14. 15	·0917					
20. 16	57. 10	14. 24	·0920					
20. 28	56. 30	14. 54	·0921					
21. 1	56. 50	15. 8	·0924					
21. 24	57. 20	18. 6	·0931					
21. 33	59. 30	19. 8	·0930					
21. 40	58. 40	20. 26	·0921					
22. 1	20. 58. 40	20. 57	·0915					
23. 36	21. 2. 50	21. 16	·0913					
23. 59	1. 50	21. 24	·0917					
		22. 2	·0909					
		22. 17	·0910					
		22. 42	·0905					
		23. 6	·0905					
		23. 26	·0910					
		23. 59	·0906					
Jan. 25		Jan. 25		Jan. 25		Jan. 25		
0. 0	21. 1. 50	0. 0	·0906	0. 0	·02546	1. 0	50 ·3	51 ·8
0. 34	3. 0	0. 33	·0908	2. 56	·02460	3. 0	51 ·2	52 ·6
1. 7	2. 30	0. 53	·0903	7. 33:	·02277	9. 0	48 ·0	50 ·5
1. 46	21. 3. 15	1. 30	·0913	14. 38	·02628	21. 0	39 ·8	43 ·0
4. 15	20. 59. 30	2. 42	·0915	19. 18	·03101			
	***	3. 8	·0918	22. 39	·03019			
6. 52	59. 0	4. 6	·0914	23. 59	·03026			
7. 15	57. 0	5. 47	·0920					
7. 46	58. 25	6. 53	·0920					
9. 10	58. 40	7. 13	·0919					
9. 57	57. 35	8. 26	·0927					
10. 26	58. 20	8. 52	·0925					
11. 6	56. 50	9. 17	·0923					
11. 29	20. 56. 40	9. 30	·0925					
13. 55	21. 0. 10	9. 47	·0923					
14. 30	4. 0	11. 17	·0929					
14. 57	21. 1. 10	11. 39	·0926					
15. 19	20. 59. 20	12. 40	·0925					
16. 10	57. 55	13. 8	·0926					
17. 4	57. 50	13. 20	·0926					
18. 47	20. 59. 0	13. 38	·0928					
19. 37	21. 0. 30	14. 6	·0927					
19. 56	20. 59. 30	14. 22	·0929					
21. 14	20. 58. 30	15. 42	·0930					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 25		Jan. 25						
h m	° ′ ″	h m		h m		h m	°	°
22. 5	21. 0. 55	15. 52	·0933					
22. 18	1. 0	16. 22	·0933					
23. 21	4. 30	17. 7	·0936					
23. 44	5. 0	17. 41	·0934					
23. 59	4. 30	18. 9	·0935					
		18. 36	·0933					
		18. 45	·0934					
		19. 7	·0932					
			***					
		19. 38	·0934					
		19. 52	·0933					
		20. 6	·0935					
		21. 1	·0931					
		21. 32	·0932					
		22. 35	·0933					
		23. 59	·0927					
Jan. 26		Jan. 26		Jan. 26		Jan. 26		
0. 0	21. 4. 30	0. 0	·0927	0. 0	·03026	9. 38	45 ·8	48 ·0
1. 17	5. 45	1. 40	·0921	2. 5	·03005	21. 0	41 ·8	45 ·0
2. 10	5. 10	2. 39	·0920	9. 15:	·02367			
3. 26	1. 50	2. 48	·0921	14. 22	·02417			
4. 37	21. 0. 50	3. 1	·0918	23. 59	·02739			
5. 49	20. 59. 0	3. 32	·0917					
9. 34	57. 55	4. 2	·0919					
13. 30	59. 0	4. 47	·0919					
19. 27	57. 30	4. 59	·0920					
20. 28	56. 30	5. 35	·0924					
21. 1	20. 56. 55	9. 46	·0926					
23. 46	21. 3. 40	10. 15	·0928					
23. 59	3. 30	13. 12	·0929					
		14. 17	·0931					
		16. 0	·0934					
		18. 42	·0935					
		19. 23	·0935					
		20. 24	·0931					
		22. 6	·0927					
		23. 37	·0924					
			(†)					
Jan. 27		Jan. 27		Jan. 27		Jan. 27		
0. 0	21. 3. 30		(†)	0. 0	·02739	1. 0	45 ·3	46 ·5
0. 18	2. 25	0. 20	·0922	2. 3	·02720	3. 0	47 ·0	47 ·5
1. 24	2. 35		***	5. 0	·02378	9. 0	46 ·3	48 ·5
2. 41	21. 1. 0	0. 43	·0921	6. 58	·02204	21. 0	41 ·0	44 ·3
5. 20	20. 58. 30	1. 5	·0925	9. 51	·02142			
5. 45	58. 30	1. 15	·0924	13. 17	·02228			
7. 7	57. 30	2. 6	·0921	23. 4	·02729			
7. 30	55. 35	3. 6	·0918	23. 59	·02758			
8. 7	57. 10	3. 24	·0919					
8. 20	55. 50	4. 0	·0918					
8. 36	55. 35	4. 25	·0919					
9. 9	57. 20	5. 21	·0916					
12. 2	58. 15	7. 6	·0922					
15. 1	57. 25	7. 20	·0919					
15. 31	58. 30	7. 39	·0923					
18. 6	58. 10	8. 16	·0922					
20. 43	55. 30	10. 30	·0929					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 27		Jan. 27						
h m	° ′ ″	h m		h m		h m	°	°
21. 51	20. 57. 10	10. 41	·0926					
23. 59	21. 2. 15	11. 7	·0930					
		11. 22	·0929					
		17. 12	·0942					
		19. 17	·0940					
		21. 52	·0929					
		22. 38	·0927					
		23. 59	·0930					
Jan. 28		Jan. 28		Jan. 28		Jan. 28		
0. 0	21. 2. 20	0. 0	·0930	0. 0	·02758	1. 0	43 ·0	45 ·0
0. 29	2. 40	1. 5	·0929	2. 12	·02826	3. 0	46 ·0	47 ·2
2. 9	21. 2. 55	1. 21	·0931	6. 53:	·02333	9. 0	49 ·0	50 ·5
4. 14	20. 59. 40	2. 8	·0931	10. 28	·02140	21. 0	47 ·3	49 ·8
4. 45	21. 0. 15	3. 24	·0927	10. 34	·02161	22. 0	47 ·5	50 ·0
7. 50	20. 57. 45	3. 45	·0924	13. 44	·02166	23. 0	48 ·1	50 ·2
11. 44	58. 10	4. 31	·0921	17. 18	·02212			
12. 13	57. 50	8. 10	·0930	20. 59	·02304			
13. 8	58. 45	8. 28	·0928	23. 59	·02437			
15. 17	59. 45	9. 47	·0929					
15. 42	59. 5	11. 45	·0931					
16. 30	59. 35	12. 3	·0933					
20. 49	55. 50	12. 14	·0932					
22. 2	20. 57. 30	14. 24	·0933					
23. 59	21. 0. 40	18. 23	·0937					
		19. 9	·0937					
		19. 23	·0936					
		20. 45	·0934					
		21. 41	·0928					
		21. 52	·0929					
		22. 58	·0926					
		23. 18	·0926					
		23. 23	·0924					
		23. 59	·0923					
Jan. 29		Jan. 29		Jan. 29		Jan. 29		
0. 0	21. 0. 45	0. 0	·0923	0. 0	·02437	0. 0	49 ·0	50 ·3
1. 43	3. 5	0. 12	·0923	1. 39:	·02430	1. 0	49 ·7	50 ·6
4. 46	21. 0. 0	0. 36	·0921	3. 40	·02201	2. 0	51 ·0	52 ·1
7. 31	20. 58. 30	1. 19	·0921	7. 7	·02267	3. 0	52 ·3	53 ·5
9. 48	58. 0	2. 38	·0923	12. 37	·02284	6. 0	54 ·0	54 ·5
10. 51	57. 45	2. 53	·0925	12. 44	·02305	9. 33	54 ·0	54 ·4
11. 0	58. 10	3. 3	·0924	13. 45	·02282	12. 0	53 ·9	54 ·5
11. 42	56. 0	7. 21	·0927	17. 0	·02279	21. 0	53 ·2	55 ·0
11. 54	57. 0	10. 21	·0922	17. 20	·02250	22. 0	53 ·7	55 ·2
12. 0	55. 25	11. 6	·0925	21. 28	·02271	23. 0	54 ·2	55 ·3
12. 18	54. 20	11. 13	·0947		·02482			
12. 57	54. 0		***	23. 24	·02498			
13. 13	54. 40	11. 45	·0926	23. 59	·02450			
13. 30	53. 50	12. 3	·0924					
15. 54	20. 59. 55	12. 9	·0928					
16. 5	21. 1. 30	12. 30	·0927					
16. 22	20. 58. 25	12. 36	·0926					
16. 54	21. 6. 0	12. 42	·0930					
17. 24	20. 58. 25		***					
17. 48	58. 50	13. 8	·0923					
18. 0	58. 0		***					
	***	13. 37	·0924					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 29		Jan. 29						
h m	° ′ ″	h m		h m		h m	°	°
18. 44	20. 59. 50	13. 40	·0920					
	**	13. 48	·0924					
19. 33	59. 30		***					
19. 51	58. 30	15. 38	·0932					
19. 59	59. 35	16. 33	·0924					
20. 27	57. 30	16. 58	·0946					
22. 30	59. 20		***					
22. 36	20. 59. 0	17. 46	·0941					
23. 59	21. 1. 30		***					
		18. 25	·0932					
		18. 39	·0936					
		18. 51	·0924					
		18. 59	·0937					
			***					
		19. 58	·0934					
		20. 12	·0928					
			***					
		21. 19	·0925					
		21. 40	·0915					
		21. 54	·0915					
		22. 19	·0912					
		22. 45	·0904					
		22. 55	·0907					
		23. 18	·0904					
			(†)					
Jan. 30		Jan. 30		Jan. 30		Jan. 30		
0. 0	21. 1. 50		(†)	0. 0	·02450	0. 0	54 ·6	55 ·7
0. 23	2. 50	1. 0	·0907*	1. 3	·02466	1. 0	55 ·3	55 ·8
0. 30	1. 55	1. 31	·0907	1. 38	·02430	2. 0	56 ·0	56 ·4
1. 0	3. 55	3. 2	·0914	2. 1	·02433	3. 0	56 ·2	56 ·6
	***	3. 20	·0914	2. 14	·02458	9. 0	54 ·5	55 ·9
3. 26	1. 0	3. 35	·0917	2. 56	·02424	21. 0	53 ·6	55 ·2
4. 17	0. 10	4. 20	·0915	5. 46	·02443			
4. 47	21. 0. 20	4. 37	·0922	6. 0	·02524			
8. 9	20. 57. 55	4. 53	·0918	7. 52	·02512			
8. 47	58. 0	5. 53	·0921	12. 35	·02573			
9. 2	57. 30	7. 51	·0922	13. 53	·02600			
10. 29	57. 30	8. 8	·0919	18. 9	·02551			
16. 35	59. 50	9. 35	·0925	21. 24	·02470			
	***		***	21. 47	·02503			
17. 49	20. 59. 30	11. 9	·0923	23. 59	·02480			
17. 56	21. 0. 25	11. 20	·0924					
18. 4	20. 59. 0	11. 29	·0922					
18. 13	21. 1. 10	12. 53	·0920					
18. 17	0. 10	13. 8	·0921					
18. 23	21. 1. 40	13. 44	·0920					
18. 33	20. 59. 45	16. 25	·0926					
18. 40	21. 2. 0	16. 31	·0924					
18. 46	0. 50	16. 37	·0926					
18. 51	1. 30		***					
19. 10	21. 0. 40	17. 57	·0927					
19. 28	20. 59. 10		***					
20. 1	59. 0	18. 8	·0922					
20. 25	57. 30	18. 16	·0925					
20. 30	55. 20		***					
20. 50	57. 20	18. 57	·0930					
21. 54	57. 0	19. 22	·0928					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 30		Jan. 30						
h m	° ′ ″	h m		h m		h m	°	°
22. 35	20. 58. 0	19. 40	·0922					
22. 51	57. 0	20. 3	·0923					
23. 0	20. 57. 35	20. 22	·0932					
23. 10	21. 0. 20	20. 52	·0928					
23. 25	0. 15		(†)					
23. 39	1. 40	21. 0	·0930					
23. 49	0. 50							
23. 59	2. 0							
Jan. 31		Jan. 31		Jan. 31		Jan. 31		
0. 0	21. 2. 0		(†)	0. 0	·02480	1. 0	55 ·8	56 ·7
0. 14	3. 40	0. 43	·0916	0. 13	·02513	3. 0	57 ·0	58 ·6
0. 40	1. 10		***	0. 45	·02492	9. 0	57 ·0	58 ·8
0. 53	3. 0	1. 9	·0907	0. 54	·02670	21. 0	54 ·8	56 ·2
1. 2	2. 40	1. 24	·0911	2. 25	·02640			
1. 29	2. 50	2. 5	·0924	3. 24	·02552			
1. 38	3. 50	2. 18	·0928	3. 37	·02578			
1. 48	3. 30	2. 38	·0926	4. 8	·02554			
1. 54	4. 0	2. 52	·0933	5. 15	·02547			
2. 19	3. 30	3. 22	·0921	5. 28	·02593			
2. 28	2. 55	3. 54	·0922	6. 37	·02572			
2. 52	4. 0	4. 17	·0925	6. 45	·02634			
3. 3	3. 50	4. 42	·0923	7. 43	·02598			
3. 23	2. 0	5. 5	·0926	11. 25	·02580			
3. 45	0. 45		***	15. 19	·02672			
4. 32	0. 20	5. 32	·0919	22. 17	·02803			
5. 13	1. 10		***	23. 45	·02736			
5. 35	1. 50	5. 50	·0918		(†)			
6. 3	21. 1. 35	6. 35	·0898					
6. 44	20. 54. 5	6. 53	·0908					
7. 27	21. 0. 10	7. 1	·0909					
7. 44	20. 58. 50	7. 10	·0914					
7. 59	58. 25	7. 38	·0907					
8. 10	59. 0	7. 46	·0908					
8. 17	58. 45	7. 55	·0905					
8. 38	59. 15	8. 7	·0909					
9. 10	58. 10	8. 42	·0910					
9. 51	58. 15	8. 51	·0912					
10. 0	58. 25	9. 10	·0916					
10. 6	57. 50	9. 32	·0915					
10. 31	58. 35	10. 7	·0920					
11. 11	56. 0	10. 40	·0916					
11. 30	58. 40	10. 55	·0919					
11. 40	20. 58. 20	11. 7	·0918					
12. 7	21. 1. 20	11. 24	·0923					
12. 24	20. 59. 35	11. 38	·0918					
12. 57	58. 25	12. 6	·0919					
13. 13	59. 30	12. 21	·0915					
13. 27	59. 0	12. 38	·0930					
13. 55	56. 10	12. 56	·0925					
14. 19	55. 0	13. 17	·0926					
14. 34	54. 30	13. 37	·0924					
14. 57	54. 35	13. 50	·0922					
15. 24	56. 45	14. 8	·0924					
16. 44	58. 0	14. 30	·0923					
17. 16	58. 10	14. 38	·0921					
17. 24	58. 40	16. 30	·0925					
18. 41	58. 50	16. 44	·0923					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 31		Jan. 31						
h m	° ′ ″	h m		h m		h m	°	°
19. 31	20. 59. 50	18. 8	·0924					
19. 37	59. 0	18. 24	·0923					
20. 22	20. 59. 20	18. 41	·0924					
20. 37	21. 0. 35	19. 0	·0923					
21. 0	1. 25	19. 51	·0917					
21. 33	0. 30	20. 4	·0916					
22. 50	5. 0	20. 8	·0912					
22. 59	3. 50	21. 15	·0908					
23. 6	6. 0	21. 39	·0910					
23. 34	7. 0	22. 35	·0905					
23. 59	6. 40	22. 40	·0906					
		22. 53	·0902					
		23. 7	·0910					
		23. 24	·0904					
		23. 59	·0910					
Feb. 1		Feb. 1		Feb. 1		Feb. 1		
0. 0	21. 6. 40	0. 0	·0910		(†)	1. 0	56 ·0	58 ·0
0. 25	5. 15	0. 7	·0908	0. 19	·02768	3. 0	57 ·0	58 ·5
1. 8	6. 50	0. 58	·0917	2. 27	·02780	9. 0	56 ·7	58 ·0
3. 15	21. 2. 0	1. 22	·0915	5. 50	·02559	22. 0	52 ·0	53 ·4
3. 35	20. 56. 45	2. 7	·0915		·02760			
3. 58	20. 59. 35		(†)	8. 35	·02675			
4. 26	21. 0. 10	10. 22	·0921	12. 48	·02706			
5. 11	20. 59. 20	11. 9	·0921	22. 48	·03034			
5. 23	21. 0. 0	11. 28	·0920		·03172			
6. 43	20. 59. 15	11. 51	·0925	23. 59	·03185			
7. 26	59. 0	12. 19	·0923					
8. 13	57. 40	12. 38	·0926					
8. 22	58. 5	12. 47	·0920					
8. 58	56. 0	13. 0	·0924					
9. 0	54. 15	13. 12	·0923					
9. 5	54. 10	13. 26	·0924					
9. 27	57. 0	13. 42	·0922					
9. 48	49. 40	14. 6	·0923					
10. 24	54. 45	15. 47	·0928					
11. 28	57. 5	15. 55	·0931					
13. 7	55. 55	16. 3	·0929					
13. 27	57. 0	16. 10	·0933					
14. 2	56. 0	16. 51	·0934					
15. 29	57. 40	17. 1	·0937					
20. 21	57. 15	17. 9	·0935					
21. 10	20. 58. 5	17. 53	·0937					
	(†)	18. 22	·0935					
23. 59	21. 1. 35	18. 30	·0936					
		19. 3	·0929					
		21. 37	·0927					
			(†)					
Feb. 2		Feb. 2		Feb. 2		Feb. 2		
0. 0	21. 1. 40		(†)	0. 0	·03185	8. 30	53 ·0	53 ·8
0. 10	3. 0	6. 37	·0920	2. 45	·03205	21. 0	52 ·2	53 ·5
0. 26	3. 15	7. 4	·0926	9. 10	·03161			
0. 33	2. 45	7. 53	·0931	10. 28	·03160			
0. 50	5. 0	8. 10	·0927	11. 22	·03143			
1. 7	4. 25	8. 46	·0929	13. 28	·03192			
1. 26	5. 20	9. 21	·0925	13. 37	·03181			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 2		Feb. 2		Feb. 2				
h m	° ′ ″	h m		h m		h m	°	°
1. 45	21. 3. 15	9. 48	·0924	22. 5	{·03167 ·03092			
2. 18	1. 50	10. 45:	·0945					
2. 28	2. 10	11. 33	·0929	23. 59	·03017			
2. 38	0. 50	11. 57	·0927					
3. 19	21. 0. 40	13. 5	·0928					
3. 31	20. 59. 45	13. 21	·0930					
4. 43	21. 2. 10	14. 53	·0930					
4. 54	1. 15	15. 9	·0932					
5. 24	1. 20	19. 23	·0933					
5. 41	4. 0	21. 44	·0918					
5. 54	4. 30	23. 21	·0914					
6. 0	3. 55	23. 59	·0915					
6. 15	4. 30							
6. 37	21. 2. 20							
7. 24	20. 59. 15							
8. 36	57. 50							
9. 10	58. 10							
9. 29	57. 50							
9. 39	57. 10							
9. 58	57. 10							
10. 40	53. 5							
11. 0	53. 15							
11. 31	56. 50							
11. 43	56. 40							
12. 1	57. 40							
20. 50	20. 57. 40							
23. 1	21. 1. 10							
23. 49	2. 5							
23. 59	2. 40							
Feb. 3		Feb. 3		Feb. 3		Feb. 3		
0. 0	21. 2. 50	0. 0	·0915	0. 0	·03017	1. 0	54 ·6	55 ·3
0. 37	3. 55	0. 28	·0912	1. 19	·02875	3. 0	55 ·8	56 ·6
2. 22	21. 3. 0	2. 9	·0920	5. 15:	·02410	9. 0	55 ·0	57 ·0
4. 14	20. 59. 20	2. 33	·0918	8. 0	·02204	21. 0	51 ·6	53 ·8
4. 50	21. 0. 15		(†)	11. 28	·02193			
5. 35	20. 59. 20	3. 0	·0927	13. 2	{·02164 ·02300			
5. 45	59. 45	3. 35	·0924					
5. 55	59. 15	4. 21	·0919	18. 28	·02538			
6. 6	59. 30	5. 11	·0918	21. 24	·02622			
6. 40	58. 15	5. 50	·0919	22. 56	·02684			
7. 15	59. 40	6. 27:	·0911	23. 59	·02705			
9. 1	58. 15	7. 0	·0922					
11. 13	57. 40	8. 48	·0924					
11. 33	54. 35	9. 0	·0926					
11. 55	53. 10	11. 11	·0924					
12. 9	54. 10	11. 38	·0934					
12. 24	54. 15	12. 26	·0922					
12. 46	56. 25	12. 40	·0923					
13. 17	56. 45	13. 26	·0923					
13. 22	57. 30	14. 51	·0927					
13. 46	57. 10	17. 12	·0932					
14. 14	58. 0	19. 53	·0928					
14. 37	57. 20	21. 38	·0921					
15. 38	58. 0	21. 56	·0918					
16. 15	59. 40	22. 52	·0917					
18. 26	57. 45	23. 7	·0919					
18. 57	58. 0	23. 40	·0913					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 3		Feb. 3						
h m	° ′ ″	h m		h m		h m	°	°
21. 44	20. 58. 10	23. 59	·0914					
22. 55	20. 59. 30							
23. 14	21. 0. 55							
23. 59	1. 10							
Feb. 4		Feb. 4		Feb. 4		Feb. 4		
	(†)	0. 0	·0914	0. 0	·02705	1. 0	54 ·0	55 ·2
0. 36	21. 3. 20	0. 19	·0914	1. 0	·02637	3. 0	55 ·0	56 ·8
0. 44	4. 35		(†)	1. 36	·02666	9. 0	57 ·5	59 ·2
1. 1	4. 20	1. 0	·0913*	3. 3	·02603	21. 0	53 ·0	54 ·3
1. 21	4. 55	2. 0	·0927	5. 45	·02340	22. 0	53 ·0	54 ·3
1. 29	5. 45	2. 28	·0926	7. 36	·02216	23. 0	53 ·3	54 ·6
1. 37	4. 15	3. 14	·0927	7. 39	·02242			
1. 48	5. 40	4. 3	·0924	8. 22	·02244			
2. 5	4. 20	4. 10	·0925	8. 27	·02298			
2. 54	21. 3. 55	4. 23	·0922	10. 37	·02261			
4. 26	20. 59. 15	4. 45	·0923	10. 42	·02342			
5. 0	21. 2. 30	5. 4	·0921	12. 24	·02327			
5. 16	1. 0	5. 30	·0926	16. 37	·02430			
5. 44	2. 10	7. 21	·0929	17. 45	·02518			
6. 56	21. 0. 30	7. 54	·0926	20. 26	·02621			
7. 46	20. 59. 25	9. 7	·0926	22. 21	·02750			
9. 36	58. 50	9. 17	·0923	23. 59	·02738			
9. 44	57. 50	9. 34	·0922					
10. 22	58. 30	9. 51	·0925					
10. 55	57. 35	10. 8	·0925					
11. 16	58. 0	11. 31	·0931					
11. 31	59. 20	11. 39	·0930					
11. 50	59. 15	12. 0:	·0935					
12. 19	58. 0	12. 37	·0928					
12. 44	59. 0	12. 54	·0928					
13. 29	58. 5	13. 0	·0930					
17. 44	58. 30	13. 40	·0928					
18. 7	59. 45	13. 52	·0930					
18. 36	58. 30	14. 58	·0929					
21. 1	20. 57. 0	15. 11	·0931					
	***	15. 23	·0930					
23. 54	21. 3. 0	17. 49	·0932					
23. 59	4. 35	17. 58	·0930					
		18. 35	·0933					
		20. 7	·0932					
		21. 4	·0926					
		21. 10	·0924					
		21. 29	·0924					
		22. 0	·0917					
		22. 21	·0916					
			(†)					
Feb. 5		Feb. 5		Feb. 5		Feb. 5		
0. 0	21. 4. 45		(†)	0. 0	·02738	0. 0	53 ·6	55 ·0
0. 2	4. 0	0. 8	·0913	0. 42	·02693	1. 0	54 ·7	55 ·4
0. 19	5. 5	2. 27	·0929	1. 37	·02724	2. 0	55 ·3	56 ·0
0. 44	4. 55	2. 53	·0929	2. 42	·02682	3. 0	55 ·8	56 ·3
0. 45	5. 0	3. 8	·0930	5. 30	·02428	6. 0	55 ·6	56 ·1
1. 0	4. 40	5. 0	·0930	7. 12	{·02334 ·02460	9. 0	55 ·2	56 ·0
1. 27	5. 0	8. 54	·0934			12. 0	54 ·0	55 ·3
2. 12	4. 0	9. 34	·0933	10. 40:	·02446	18. 0	50 ·2	52 ·3
2. 30	3. 0	9. 49	·0934	13. 38	·02528	21. 0	49 ·6	51 ·8

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Reading of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 5		Feb. 5		Feb. 5		Feb. 5		
h m	° ′ ″	h m		h m		h m	°	°
2. 36	21. 3. 5	10. 20	·0932	23. 2	·03035	22. 0	49·8	51·8
2. 50	2. 0	11. 47	·0934	23. 59	·03018	23. 0	50·5	52·3
3. 23	0. 35	12. 11	·0937					
4. 15	21. 0. 10	12. 38:	·0934					
9. 57	20. 58. 0	13. 7	·0937					
12. 35	57. 30	13. 53:	·0933					
12. 45	57. 45	14. 21	·0935					
13. 11	57. 0	14. 28	·0934					
14. 12	57. 30	16. 3	·0940					
17. 33	58. 25	16. 22	·0939					
18. 39	59. 10	17. 21	·0945					
19. 20	58. 5	17. 46	·0943					
19. 58	58. 30	18. 53	·0953					
20. 5	58. 0	19. 43	·0950					
20. 13	58. 10	19. 53	·0951					
20. 33	57. 0	20. 0	·0950					
20. 44	57. 15	20. 12	·0953					
21. 3	56. 35	21. 28	·0945					
22. 50	20. 58. 50	21. 32	·0946					
23. 15	21. 0. 15	21. 46	·0942					
23. 30	3. 35	22. 0:	·0943					
23. 39	3. 0	22. 42	·0935					
23. 48	4. 0	23. 8	·0936					
23. 57	3. 40	23. 13	·0934					
23. 59	3. 50	23. 28	·0939					
		23. 36	·0937					
		23. 41	·0938					
		23. 59	·0932					
Feb. 6		Feb. 6		Feb. 6		Feb. 6		
0. 0	21. 4. 0	0. 0	·0932	0. 0	·03018	0. 0	51·0	52·7
0. 29	6. 10	0. 20	·0925	0. 53	·03004	1. 0	51·3	53·0
0. 33	7. 30	0. 36	·0933	1. 51	·03013	2. 0	52·3	53·7
0. 42	7. 0	0. 48	·0928	3. 53	·02887	3. 0	53·2	54·3
0. 48	7. 30	0. 55	·0926	7. 18	·02723	9. 0	51·5	52·6
0. 57	6. 10	1. 6	·0929	10. 12	·02776	21. 0	42·0	45·0
1. 10	7. 30	1. 8	·0927	13. 27	·02972			
1. 29	4. 50	1. 21	·0928	14. 47	{·03105			
1. 36	6. 50	1. 23	·0925		{·03078			
1. 44	4. 30	1. 35	·0929	19. 39	·03004			
1. 57	7. 30	1. 40	·0921	23. 59	·02850			
2. 0	5. 15	1. 55	·0932					
2. 22	3. 55	1. 56	·0927					
2. 57	4. 5	2. 7	·0927					
3. 6	2. 55	2. 20	·0922					
3. 46	2. 55	3. 0	·0929					
4. 0	2. 0	3. 9	·0930					
4. 54	21. 1. 45	3. 17	·0928					
5. 30	20. 58. 50	3. 40	·0931					
6. 4	59. 30		***					
6. 54	58. 50	4. 8	·0924					
7. 22	54. 10		***					
7. 44	54. 50	5. 0	·0928					
7. 55	56. 10	5. 9	·0926					
8. 18	55. 50	5. 25:	·0931					
9. 1	56. 15	5. 39	·0928					
9. 17	57. 0	6. 6	·0925					
9. 45	57. 5	7. 4	·0935					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 6		Feb. 6						
h m	° ′ ″	h m		h m		h m	°	°
9. 59	20. 55. 0	7. 24	·0923					
10. 16	54. 40	7. 35	·0925					
10. 44	56. 5	7. 38	·0925					
11. 0	55. 25	8. 7	·0932					
11. 15	56. 30	8. 16	·0930					
12. 0	56. 0	9. 5	·0935					
12. 33	57. 10	9. 21	·0937					
12. 54	56. 0	9. 49	·0941					
13. 12	56. 20	10. 10	·0938					
13. 30	55. 0	10. 24	·0938					
13. 43	55. 30	10. 41	·0942					
14. 1	54. 45	10. 52	·0941					
14. 22	56. 10	11. 22	·0944					
15. 17	57. 5	11. 36	·0943					
16. 10	58. 10	12. 0	·0946					
16. 20	58. 35	12. 11	·0945					
16. 45	20. 57. 50	12. 26	·0949					
17. 37	21. 0. 5	12. 49	·0949					
19. 3	20. 58. 0	13. 5	·0953					
19. 45	58. 5	13. 11	·0949					
20. 28	20. 58. 45	13. 21	·0950					
20. 48	21. 0. 45	13. 48	·0948					
21. 13	20. 59. 50	14. 1	·0951					
	(†)	14. 33	·0952					
22. 46	21. 4. 35	14. 41	·0951					
22. 52	3. 10	15. 36	·0956					
	***	16. 31	·0955					
23. 39	3. 10	16. 38	·9956					
23. 55	2. 10	16. 48	·0954					
23. 59	2. 30	16. 53	·0956					
		17. 18	·0953					
		18. 23	·0961					
		18. 55	·0958					
		19. 11	·0959					
		19. 18	·0957					
		19. 25	·0958					
		20. 7	·0952					
		20. 22	·0952					
		20. 30	·0950					
		20. 48	·0949					
		21. 9	·0953					
			(†)					
		22. 23	·0957					
		22. 39	·0953					
		22. 52	·0954					
		23. 7	·0952					
		23. 10	·0953					
		23. 16	·0959					
		23. 22	·0957					
		23. 32	·0958					
		23. 59	·0944					
Feb. 7		Feb. 7		Feb. 7		Feb. 7		
0. 0	21. 2. 45	0. 0	·0944	0. 0	·02850	1. 0	43·0	45·0
0. 29	2. 45	0. 21	·0945	0. 23	·02880	3. 0	45·8	46·5
0. 56	2. 15	0. 34	·0951	1. 47	·02880	9. 0	44·2	46·0
1. 2	2. 50	0. 51	·0948	5. 27	·02645	21. 0	36·0	40·0
1. 13	2. 20	1. 0	·0949	6. 45	·02589			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 7		Feb. 7		Feb. 7				
h m	° ′ ″	h m		h m		h m	°	°
1. 30	21. 2. 40	1. 1	·0957	8. 37	·02585			
1. 40	2. 0	1. 18	·0947	8. 45	·02597			
2. 8	3. 5	1. 28	·0949	9. 32	·02559			
2. 28	2. 10	1. 31	·0949	10. 34	·02578			
2. 54	2. 10	1. 40	·0948	14. 38	·02717			
3. 20	1. 15	2. 1	·0957	18. 5	·02944			
5. 40	21. 0. 35	2. 50	·0953	18. 56	·02923			
5. 59	20. 59. 30	3. 5	·0954	19. 9	·02883			
6. 30	21. 1. 35	3. 13	·0953	19. 26	·02890			
6. 53	20. 57. 30	3. 18	·0957	19. 33	·02860			
7. 15	21. 5. 0	4. 18	·0957	20. 30	·02857			
7. 30	20. 57. 35	4. 23	·0949		***			
7. 35	57. 10	5. 16	·0953	21. 44	·02703			
7. 52	20. 53. 35	5. 26	·0953	22. 12	·02731			
8. 20	21. 0. 0	5. 39	·0953		·02677			
8. 29	20. 58. 30	6. 26	·0947	22. 47	·02683			
8. 45	41. 30	6. 37	·0948	23. 59	·02650			
8. 57	46. 10	6. 55	·0942					
9. 2	47. 0	7. 13	·0952					
9. 30	56. 10	7. 34	·0927					
9. 43	54. 45	7. 40	·0932					
10. 6	55. 0	7. 50	·0929					
10. 33	57. 40	8. 7	·0942					
10. 48	54. 10	8. 20	·0941					
10. 58	54. 10	8. 38	·0926					
11. 8	53. 5	8. 54	·0965					
11. 19	53. 30	9. 15	·0953					
11. 30	52. 30	9. 23	·0954					
11. 33	52. 50	9. 38	·0932					
11. 59	49. 35	9. 52	·0932					
12. 12	50. 30	10. 0	·0935					
12. 23	49. 50	10. 8	·0933					
12. 47	54. 10	10. 17	·0941					
13. 51	56. 10	10. 30	·0943					
14. 0	57. 25	10. 45:	·0935					
14. 20	57. 20	11. 2	·0944					
14. 44	53. 50	11. 20	·0943					
15. 16	56. 0	11. 27	·0938					
16. 17	54. 25	11. 38	·0943					
16. 45	58. 0	11. 45	·0943					
17. 9	56. 0	12. 19	·0931					
17. 27	55. 10	12. 38	·0936					
17. 34	56. 10	12. 47	·0935					
17. 43	55. 25	12. 55	·0935					
18. 24	56. 40	13. 38	·0945					
18. 45	57. 0	14. 8	·0946					
20. 47	20. 57. 10	14. 18	·0945					
21. 44	21. 1. 0	15. 11	·0948					
21. 54	0. 20	15. 25	·0947					
22. 43	5. 10	15. 41	·0950					
23. 0	4. 55	16. 9	·0949					
23. 21	2. 40	16. 30	·0955					
23. 45	3. 0	17. 28	·0949					
23. 55	2. 10	18. 7	·0950					
23. 59	2. 0	18. 19	·0948					
		18. 37	·0950					
		19. 6	·0947					
		20. 41	·0946					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 8		Feb. 8		Feb. 8		Feb. 8		
h	° ′ ″	h m		h m		h m	°	°
0. 0	21. 2. 0	20. 58	·0946	0. 0	·02650	1. 0	39 ·2	41 ·7
0. 13	4. 0	21. 36	·0947	2. 37	·02520	3. 0	41 ·3	43 ·1
0. 29	2. 30	21. 52	·0949		·02475	9. 0	39 ·0	42 ·0
1. 0	3. 45	22. 3	·0947	4. 28	·02300	22. 10	33 ·5	37 ·5
1. 30	2. 45	22. 24	·0951	6. 58	·02191			
1. 46	3. 45		(†)	9. 52	·02183			
1. 58	2. 50	22. 40	·0952	22. 10	·02632			
2. 7	2. 50	22. 57	·0950	23. 59	·02566			
2. 44	0. 20		(†)					
3. 2	21. 1. 55							
	***							
4. 9	20. 58. 30							
9. 57	55. 55							
10. 3	56. 15							
10. 47	55. 55							
11. 24	54. 5							
11. 36	55. 35							
11. 47	55. 55							
12. 12	54. 30							
12. 45	55. 15							
14. 13	54. 30							
14. 35	52. 20							
15. 2	51. 35							
15. 30	52. 40							
15. 33	54. 25							
16. 44	55. 55							
17. 10	55. 25							
18. 44	56. 40							
19. 0	56. 5							
20. 16	57. 5							
21. 9	58. 30							
21. 19	59. 30							
21. 52	20. 59. 55							
22. 5	21. 0. 50							
23. 53	1. 0							
23. 59	1. 5							
Feb. 9		Feb. 9		Feb. 9		Feb. 9		
0. 0	21. 1. 5	10. 10	·0940*	0. 0	·02566	10. 10	41 ·5	44 ·0
1. 13	2. 25	21. 0	·0936*	1. 52	·02520	21. 0	40 ·2	43 ·0
1. 23	2. 55			7. 14	·02172			
1. 44	1. 45			11. 0	·02022			
2. 55	21. 0. 25			12. 6	·01950			
3. 14	20. 59. 10			19. 44	·01918			
3. 55	58. 40			22. 28	·01965			
4. 25	59. 10			23. 13	·01950			
4. 44	58. 45				(†)			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

February 9. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 9								
h m	° ′ ″	h m		h m		h m	°	°
5. 30	20. 58. 55							
5. 43	59. 30							
6. 2	20. 59. 20							
6. 35	21. 0. 50							
7. 5	0. 10							
7. 15	1. 20							
7. 18	21. 1. 25 (†)							
8. 32	20. 57. 40							
8. 59	57. 35							
9. 9	57. 50							
9. 46	56. 35							
10. 48	56. 20							
11. 1	56. 50							
11. 7	55. 0							
11. 17	54. 45							
11. 27	51. 50							
11. 35	52. 0							
11. 45	51. 0							
12. 15	54. 25							
12. 27	53. 55							
12. 35	54. 5							
12. 44	53. 40							
13. 27	55. 10							
13. 40	54. 10							
14. 58	53. 45							
15. 15	50. 20							
15. 50	48. 45							
16. 30	51. 0							
16. 50	51. 0							
19. 15	58. 45							
19. 37	58. 45							
20. 0	57. 0							
20. 24	56. 30 ***							
22. 0	20. 57. 15 ***							
23. 36	21. 2. 0							
23. 59	2. 40							
Feb. 10		Feb. 10		Feb. 10		Feb. 10		
0. 0	21. 2. 25		(†)		(†)	1. 0	44 ·0	45 ·0
0. 8	2. 0	0. 30	·0928	0. 32	·01928	3. 0	47 ·0	48 ·0
0. 18	3. 0	0. 41	·0927	1. 7	·01903	9. 0	45 ·5	47 ·3
0. 45	1. 20	0. 56	·0931	3. 5	·01687	21. 0	36 ·3	41 ·2
0. 59	2. 40	1. 21	·0931		·01746			
2. 13	0. 35	2. 31	·0941	3. 50	·01694			
2. 36	21. 0. 55	3. 0	·0937	6. 19	·01963			
2. 55	20. 59. 20	4. 22	·0941	9. 50	·01998			
3. 54	58. 0	4. 37	·0944	12. 15	·02087			
4. 30	58. 10	5. 9	·0940	12. 34	·02093			
6. 29	57. 30	5. 12	·0944	16. 57	·02398			
7. 30	56. 45	5. 29	·0938	20. 54	·02720			
8. 53	57. 0		***	22. 20	·02897			
12. 17	56. 30	5. 55	·0936	23. 1	·02936			
13. 33	54. 10	7. 22	·0943		(†)			
14. 38	55. 30	7. 30	·0943					
15. 0	56. 50	8. 7	·0945					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 10		Feb. 10						
h m	° ′ ″	h m		h m		h m	°	°
15. 18	20. 56. 0	8. 22	·0944					
16. 4	56. 10	8. 27	·0945					
16. 16	55. 30	8. 38	·0944					
17. 31	56. 30	8. 52	·0946					
18. 2	56. 5	9. 4	·0947					
18. 44	56. 40	9. 23	·0944					
19. 37	55. 10	9. 42	·0948					
21. 0	20. 56. 55	9. 55	·0946 ***					
22. 27	21. 0. 0							
23. 59	1. 55	11. 27	·0948					
		11. 37	·0946					
		11. 52	·0947					
		12. 20	·0946					
		12. 38	·0952					
		12. 54	·0950					
		13. 25	·0947					
		13. 57	·0949 ***					
		17. 23	·0953					
		19. 38	·0949					
		19. 52	·0951					
		20. 4	·0949					
		20. 20	·0950					
		20. 42	·0946					
		21. 27	·0946					
		22. 38	·0944					
		23. 47	·0944 (†)					
Feb. 11		Feb. 11		Feb. 11		Feb. 11		
0. 0	21. 1. 55		(†)		(†)	1. 0	39 ·8	42 ·0
1. 0	2. 20	0. 50	·0943	0. 22	·02960	3. 0	42 ·2	44 ·0
1. 25	1. 45	1. 47	·0946	1. 56	·02937	9. 0	45 ·3	47 ·2
1. 53	21. 1. 30	1. 55	·0946	3. 52	·02804	21. 0	45 ·0	47 ·0
2. 58	20. 59. 30	2. 51	·0947	4. 58	·02674	22. 0	45 ·8	48 ·3
3. 6	58. 40	3. 8	·0946	8. 50	·02373	23. 0	46 ·8	48 ·6
3. 15	58. 30	3. 23	·0948	12. 0	·02225			
3. 40	57. 10	3. 40	·0945	16. 22	·02143			
3. 57	58. 15	3. 52	·0947	21. 33	·02122			
4. 5	57. 15	4. 9	·0945	22. 38	·02137			
5. 36	58. 25	4. 25	·0951	23. 59	·02100			
7. 31	57. 15	4. 36	·0946					
9. 28	57. 0	5. 5	·0946					
10. 4	57. 45	5. 23	·0942					
10. 52	56. 55	6. 0	·0945					
11. 16	54. 35	7. 8	·0945					
11. 38	56. 25	7. 26	·0948					
12. 7	55. 0	7. 42	·0945					
12. 29	53. 10	9. 33	·0946					
12. 58	53. 10	9. 52	·0947					
13. 6	54. 0	11. 16	·0939					
13. 48	52. 20	11. 43	·0945					
14. 24	53. 10	12. 24	·0934					
14. 42	52. 5	12. 53	·0937					
15. 0	52. 50	13. 4	·0936					
15. 15	52. 10	13. 20	·0939					
15. 33	53. 30	13. 50	·0933					
15. 49	53. 5	14. 19	·0938					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 11		Feb. 11						
h m	° ′ ″	h m		h m		h m	°	°
16. 18	20. 54. 50	14. 33	·0936					
17. 3	54. 50	15. 40	·0942					
17. 25	56. 20	15. 54	·0940					
17. 40	56. 10	17. 51	·0942					
18. 7	54. 50	18. 10	·0944					
18. 33	56. 0	19. 0	·0940					
18. 57	56. 0	19. 8	·0942					
19. 3	55. 10	19. 39	·0941					
19. 22	54. 50	20. 42	·0935					
19. 51	54. 45	21. 37	·0935					
19. 58	55. 30	22. 14	·0931					
20. 23	55. 30	22. 48	·0934					
	***	23. 1	·0928					
21. 5	59 5	23. 19	·0927					
	***	23. 23	·0925					
21. 28	20. 59. 30	23. 32	·0927					
	***	23. 58	·0925					
22. 5	21. 1. 0		(†)					
22. 23	0. 55							
22. 35	1. 20							
22. 54	3. 55							
23. 43	6. 55							
23. 59	6. 30							
Feb. 12		Feb. 12		Feb. 12		Feb. 12		
0. 0	21. 6. 30		(†)	0. 0	·02100	0. 0	47 ·0	49 ·2
0. 10	6. 15	0. 7	·0924	1. 58	·02022	1. 0	48 ·0	49 ·3
0. 27	5. 0	0. 18	·0926	2. 7	·02048	2. 0	49 ·2	50 ·3
0. 37	4. 50	0. 23	·0925	3. 43	·02086	3. 0	50 ·5	51 ·2
0. 44	5. 10	1. 11	·0927	6. 45	·02077	6. 0	49 ·8	51 ·8
0. 54	5. 0	1. 27	·0930	6. 52	·02134	9. 0	49 ·0	51 ·5
1. 29	5. 50	1. 39	·0933	8. 32	·02097	12. 0	47 ·8	50 ·3
1. 45	5. 40	2. 8	·0929	11. 47:	·02121	18. 0	42 ·8	44 ·0
2. 33	4. 15	2. 33	·0930	15. 57	·02250	21. 0	44 ·0	46 ·8
2. 47	3. 10	3. 7	·0923	22. 41	·02579	22. 0	44 ·6	46 ·8
2. 56	3. 35	4. 13	·0924	23. 59	·02604	23. 0	45 ·0	46 ·8
3. 57	1. 5	4. 38	·0925					
4. 5	1. 15	5. 4	·0923					
4. 21	0. 20		***					
4. 46	21. 0. 25	5. 55	·0925					
5. 5	20. 59. 45	6. 26	·0931					
5. 46	21. 0. 10	6. 56	·0931					
6. 4	20. 58. 50	8. 7	·0936					
7. 21	58. 0	8. 23	·0934					
7. 29	58. 30	9. 14	·0935					
9. 30	56. 40	9. 33	·0939					
11. 40	57. 30	10. 10	·0935					
11. 52	57. 0	11. 26	·0935					
12. 29	57. 10	11. 47	·0937					
12. 44	56. 30	12. 25	·0935					
14. 48	58. 10	14. 8	·0937					
15. 25	56. 30	14. 49	·0940					
15. 37	56. 15	15. 0	·0938					
15. 48	57. 25	15. 10	·0940					
16. 22	58. 5	16. 7	·0936					
16. 35	57. 40	16. 57	·0941					
16. 38	56. 50	18. 7	·0935					
17. 19	55. 5	18. 23	·0939					
Feb. 12		Feb. 12						
h m	° ′ ″	h m		h m		h m	°	°
17. 57	20. 57. 40	18. 55	·0940					
	***	19. 21	·0943					
19. 12	55. 25	20. 0	·0940					
19. 57	57. 30	20. 31	·0936					
20. 43	20. 57. 20	20. 52	·0940					
	***	21. 52	·0931					
21. 59	21. 1. 25	21. 58	·0931					
22. 24	0. 55	22. 25	·0923					
	***	22. 36	·0926					
23. 40	4. 10	22. 55	·0925					
23. 59	2. 30	23. 34	·0933					
		23. 50	·0931					
			(†)					
Feb. 13		Feb. 13		Feb. 13		Feb. 13		
0. 0	21. 2. 30		(†)	0. 0	·02604	0. 0	45 ·6	46 ·8
0. 20	2. 5	0. 47	·0934	1. 2	·02568	1. 0	45 ·5	47 ·2
0. 35	2. 15	1. 6	·0935	2. 20	·02590	2. 0	46 ·4	48 ·5
1. 0	3. 40	1. 32	·0942	7. 48	·02391	3. 0	47 ·0	48 ·7
1. 8	3. 0	1. 43	·0938	8. 7	·02399	9. 0	46 ·5	48 ·0
1. 30	6. 55	1. 53	·0944	9. 14	·02357	21. 0	43 ·0	45 ·3
1. 57	5. 10	2. 7	·0946	13. 47	·02389			
2. 2	5. 15	2. 25	·0935	22. 37	·02697			
2. 17	4. 10	2. 34	·0937	23. 59	·02688			
2. 28	1. 55	2. 54	·0927					
2. 40	4. 0	3. 9	·0935					
2. 45	3. 0	3. 22	·0932					
3. 17	1. 0	3. 35	·0933					
3. 40	1. 0	3. 50	·0929					
4. 0	2. 0	4. 13	·0932					
4. 16	1. 0	4. 38	·0924					
4. 30	0. 55	4. 49	·0924					
4. 56	21. 1. 15	5. 5	·0928					
5. 31	20. 59. 25	5. 29	·0921					
5. 47	59. 45	5. 38	·0921					
6. 5	57. 50	5. 47	·0921					
7. 8	57. 10	6. 8	·0925					
7. 27	53. 0	6. 20	·0923					
7. 39	45. 40	6. 31	·0927					
7. 51	43. 0	6. 38	·0925					
8. 0	43. 20	7. 13	·0931					
8. 39	55. 55	7. 22	·0928					
8. 53	54. 20	7. 32	·0933					
8. 59	54. 15		***					
9. 5	52. 30	8. 8	·0924					
9. 16	51. 40	8. 32	·0940					
9. 23	50. 50	8. 38	·0937					
9. 28	51. 25	8. 47	·0940					
9. 36	50. 50	9. 1	·0924					
9. 45	50. 50	9. 12	·0921					
10. 3	54. 45	9. 35	·0916					
10. 23	54. 30	9. 52	·0920					
10. 35	56. 0	10. 10:	·0932					
10. 55	55. 5	10. 25	·0928					
11. 2	56. 20	10. 37	·0936					
11. 14	56. 20	10. 49	·0940					
11. 30	53. 55	10. 58	·0933					
11. 44	56. 0	11. 10	·0936					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 13		Feb. 13						
h m	° ′ ″	h m		h m		h m	°	°
11. 56	20. 54. 10	11. 17	·0935					
12. 18	54. 5	11. 37	·0941					
12. 45	55. 5	11. 55	·0934					
13. 0	57. 5	12. 20	·0932					
13. 14	56. 30	12. 31	·0934					
13. 54	54. 0	12. 50	·0931					
14. 8	53. 35	13. 1	·0933					
14. 30	55. 0	13. 8	·0933					
14. 45	53. 30	13. 20	·0938					
15. 4	53. 40	13. 37	·0941					
15. 29	55. 10	14. 0	·0936					
15. 39	55. 0	14. 12	·0939					
16. 1	56. 0	14. 45	·0935					
16. 38	55. 0	15. 7	·0936					
16. 53	56. 0	15. 45	·0935					
17. 18	54. 50	17. 34	·0942					
18. 12	54. 50	17. 57	·0941					
18. 32	55. 45	18. 8	·0943					
	***	18. 37	·0943					
20. 47	57. 0	18. 56	·0940					
20. 57	57. 30	19. 18	·0942					
21. 3	57. 0	19. 45	·0936					
21. 58	59. 35	19. 53	·0938					
22. 13	20. 58. 50	20. 15	·0934					
23. 16	21. 2. 50	20. 23	·0936					
23. 38	1. 50	21. 10	·0930					
23. 59	3. 40	21. 22	·0931					
		21. 42	·0927					
		21. 49	·0928					
		22. 8	·0922					
		22. 51	·0924					
		23. 6	·0926					
		23. 34	·0924					
		23. 59	·0931					
Feb. 14		Feb. 14		Feb. 14		Feb. 14		
0. 0	21. 4. 10	0. 0	·0931	0. 0	·02688	1. 0	45 ·0	46 ·8
0. 14	6. 0	0. 6	·0933	1. 38	·02690	3. 0	47 ·0	48 ·3
0. 17	5. 55	0. 25	·0920	5. 37	·02425	9. 0	46 ·1	48 ·0
0. 28	4. 55	0. 38	·0922	8. 27	·02330	21. 0	43 ·0	45 ·6
0. 38	5. 15	0. 53	·0919	11. 22	·02333			
0. 54	2. 50	1. 6	·0919	17. 18	·02447			
1. 0	2. 30	1. 15	·0923	22. 56	·02581			
1. 22	4. 25	2. 20	·0933	23. 59	·02543			
1. 29	4. 0	2. 45	·0938					
1. 45	5. 0	2. 53	·0938					
2. 0	2. 0	3. 20	·0943					
2. 17	1. 10	3. 35	·0943					
2. 52	0. 45	3. 57	·0938					
3. 15	1. 35	4. 16	·0939					
4. 15	0. 0	4. 23	·0937					
4. 29	21. 0. 20	5. 13:	·0930					
5. 0	20. 58. 45	5. 42	·0937					
5. 43	58. 0	5. 50	·0936					
6. 30	58. 40	6. 13	·0940					
6. 43	58. 0	7. 2	·0934					
7. 1	54. 15	7. 17	·0946					
7. 12	50. 35	7. 29	·0951					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 14		Feb. 14						
h m	° ′ ″	h m		h m		h m	°	°
7. 21	20. 48. 55	7. 35	·0951					
7. 33	48. 10	7. 45	·0953					
8. 15	54. 50	8. 14	·0943					
8. 27	54. 20	8. 35	·0931					
8. 36	51. 40	9. 5	·0933					
8. 50	49. 50	9. 30	·0930					
	***	10. 8:	·0943					
9. 21	52. 40	10. 30	·0939					
9. 54	52. 20	11. 3	·0940					
10. 7	53. 0	11. 22	·0943					
10. 16	54. 20	11. 35	·0941					
10. 52	55. 15	12. 11	·0941					
11. 0	54. 35	12. 27	·0944					
11. 47	54. 5	12. 52	·0942					
12. 37	55. 0	13. 7	·0946					
13. 27	54. 35	13. 48	·0944					
13. 53	55. 15	14. 9	·0945					
14. 12	54. 55	14. 30	·0943					
14. 42	55. 45							
15. 5	55. 5	16. 12	·0943					
15. 39	56. 10	16. 50	·0953					
15. 48	56. 0	17. 22	·0950					
16. 29	57. 55	17. 49	·0951					
17. 15	54. 10	18. 0	·0949					
17. 27	54. 5	18. 20	·0948					
17. 50	55. 55		***					
18. 12	56. 0	19. 52	·0945					
18. 24	57. 0	20. 22	·0949					
18. 45	56. 50	20. 35	·0946					
18. 48	56. 0	20. 41	·0948					
19. 23	56. 45	21. 22	·0944					
19. 29	55. 40	21. 45	·0946					
19. 37	56. 25	22. 31	·0941					
20. 0	55. 40	23. 35	·0942					
20. 35	55. 55	23. 59	·0945					
20. 51	57. 0							
21. 16	57. 0							
21. 40	57. 50							
21. 45	59. 10							
21. 53	20. 59. 0							
22. 35	21. 1. 10							
23. 59	2. 0							
Feb. 15		Feb. 15		Feb. 15		Feb. 15		
0. 0	21. 2. 0	0. 0	·0945	0. 0	·02543	1. 0	46 ·8	48 ·6
0. 55	2. 5	1. 38	·0945	0. 22	·02567	3. 0	49 ·8	50 ·7
2. 23	0. 50	2. 15	·0946	1. 58	·02471	9. 0	49 ·5	51 ·0
2. 30	21. 0. 0	2. 52	·0943	2. 56	·02370	22. 35	43 ·0	45 ·0
3. 23	20. 59. 50	3. 10	·0944	4. 23	·02184			
3. 44	58. 50	3. 39:	·0955	5. 12	·02108			
3. 46	57. 35	3. 53	·0950		·02235			
3. 59	57. 15	4. 25	·0942	6. 5	·02203			
4. 17	56. 10	4. 43	·0941	6. 14	·02223			
4. 33	57. 10	4. 56	·0943	9. 24	·02218			
4. 49	56. 50	5. 11	·0940	11. 54	·02230			
5. 6	57. 55	5. 51:	·0945	14. 8	·02293			
5. 51	58. 40	6. 34:	·0937		·02320			
6. 21	58. 0	6. 59	·0944	15. 28	·02353			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 15		Feb. 15		Feb. 15				
h m	° ′ ″	h m		h m		h	°	°
6. 45	20. 54. 30	7. 8	·0943	19. 32	·02541			
7. 26	55. 10	7. 56	·0944	23. 59	·02760			
7. 38	56. 15	8. 9	·0946					
8. 36	56. 35	8. 23	·0945					
8. 55	56. 10	9. 23	·0949					
10. 7	55. 15	9. 52	·0946					
10. 24	53. 10	10. 22	·0948					
10. 59	51. 0	10. 39	·0940					
11. 33	54. 45	11. 7	·0940					
12. 15	55. 0	11. 38	·0947					
12. 29	56. 0	11. 46	·0948					
13. 21	56. 10	13. 12	·0951					
14. 29	55. 0	13. 22	·0953					
15. 0	57. 35	13. 37	·0952					
15. 37	54. 0	14. 20	·0950					
15. 50	54. 0	15. 2	·0954					
16. 28	56. 15	15. 40	·0948					
17. 36	53. 15	17. 12	·0951					
17. 48	55. 35	19. 26	·0953					
18. 20	56. 25							
21. 9	55. 30	22. 20	·0946					
22. 31	58. 30	23. 20	·0950					
23. 6	20. 59. 0	23. 59	·0948					
23. 59	21. 0. 10							
Feb. 16		Feb. 16		Feb. 16		Feb. 16		
0. 0	21. 0. 10	0. 0	·0948	0. 0	·02760	9. 0	45·2	46·9
0. 40	20 59. 50	0. 49	·0952	0. 25	·02777	21. 0	41·6	44·2
0. 49	21. 0. 20	1. 0	·0951	0. 39	·02796			
1. 32	20. 59. 0	1. 33	·0952	2. 17	·02803			
2. 28	58. 45	2. 45	·0950	3. 30	·02752			
3. 58	57. 35	2. 53	·0951	5. 33	·02644			
5. 0	58. 15	3. 53	·0946	7. 50	·02570			
6. 32	57. 55	4. 38	·0949	9. 40	·02558			
8. 37	55. 45	4. 51	·0946	10. 15	·02546			
9. 7	52. 10	5. 34	·0947	14. 5	·02700			
9. 29	54. 5	5. 52	·0952	16. 53	·02862			
9. 39	53. 10	6. 6	·0950	22. 34	·03035			
9. 47	54. 0	6. 28	·0952	23. 59	·03003			
10. 21	50. 20	7. 30	·0951					
10. 34	51. 10	7. 40	·0954					
10. 45	50. 50	7. 59	·0953					
12. 36	55. 55	8. 21	·0955					
12. 59	55. 0	8. 39	·0951					
13. 20	56. 50	8. 58	·0957					
13. 33	56. 35	9. 28	·0952					
13. 45	55. 15	9. 45	·0964					
14. 10	56. 0	9. 58	·0964					
14. 23	55. 0	10. 20	·0947					
15. 8	54. 45	10. 40	·0944					
15. 22	54. 0	11. 0	·0949					
16. 2	55. 5	11. 19	·0947					
16. 22	55. 10	11. 30	·0949					
	***		***					
17. 51	55. 15	12. 19	·0948					
18. 35	56. 20	12. 27	·0945					
19. 1	57. 5	12. 37	·0948					
19. 18	56. 55	13. 1	·0951					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 16		Feb. 16						
h m	° ′ ″	h m		h m		h m	°	°
19. 30	20. 57. 5	13. 28	·0948					
20. 29	57. 0	13. 52	·0949					
20. 32	57. 30	14. 4	·0948					
20. 40	57. 0	14. 15	·0950					
21. 29	20. 57. 40	14. 29	·0946					
22. 15	21. 0. 5	14. 43	·0952					
23. 59	1. 40	15. 6	·0951					
		15. 40	·0953					
		16. 59	·0951					
		17. 37	·0961					
		18. 25	·0963					
		19. 11	·0958					
		19. 26	·0959					
			***					
		21. 13	·0951					
		21. 45	·0953					
		22. 53	·0946					
		23. 12	·0947					
		23. 49	·0953					
			(†)					
Feb. 17		Feb. 17		Feb. 17		Feb. 17		
0. 0	21. 1. 45		(†)	0. 0	·03003	1. 0	45·2	47·5
1. 18	21. 0. 45	0. 15	·0951	1. 3	·02977	3. 0	47·8	49·5
1. 40	20. 59. 10	0. 42	·0951	2. 45	·02813	9. 0	49·0	51·0
1. 54	59. 45	0. 56	·0949	5. 28	·02502	21. 10	47·2	49·0
2. 35	58. 30	1. 15	·0949	6. 19	·02436			
4. 6	58. 10	1. 33	·0947	7. 1	·02416			
5. 40	59. 20	1. 47	·0951	7. 55	·02359			
9. 2	57. 55	2. 6	·0949	8. 17	·02318			
9. 31	56. 10	2. 37	·0950	10. 21	·02212			
	***	2. 52	·0948	13. 37	·02181			
10. 53	56. 35	3. 9	·0949	18. 54	·02306			
11. 0	57. 50	3. 36	·0948	21. 2	·02355			
11. 51	54. 50	4. 10	·0947	23. 59	·02452			
13. 18	56. 50	4. 43	·0947					
13. 33	56. 5	5. 4	·0949					
19. 0	57. 10	5. 21	·0947					
20. 29	20. 57. 50	8. 37	·0949					
21. 44	21. 0. 25	9. 3	·0947					
22. 13	2. 30	9. 54:	·0955					
22. 58	4. 0	10. 10	·0948					
23. 28	3. 35	10. 52	·0942					
23. 59	3. 10	11. 10	·0947					
		11. 23	·0943					
		11. 32	·0946					
		11. 43	·0943					
		12. 8	·0942					
		12. 38	·0944					
		13. 11	·0943					
		13. 30	·0945					
		14. 45	·0946					
		14. 52	·0945					
		15. 5	·0948					
		17. 30	·0948					
		19. 38	·0946					
		20. 1	·0947					
		21. 14	·0943					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Feb. 17 h m		h m		h m	°	°
		21. 31	·0944					
		21. 38	·0945					
		22. 45	·0938					
		23. 17	·0943 (†)					
Feb. 18		Feb. 18		Feb. 18		Feb. 18		
0. 0	21. 3. 10	0. 0	·0935	0. 0	·02452	1. 0	51 ·0	51 ·4
0. 35	2. 50	1. 6	·0941	2. 3:	·02380	3. 0	54 ·0	54 ·0
0. 45	3. 0	1. 24	·0941	4. 9	·02130	9. 0	55 ·0	55 ·0
2. 9	1. 15	2. 0	·0943	4. 57	·02054	21. 0	50 ·3	51 ·9
2. 58	21. 0. 50	2. 49	·0940		·02083	22. 0	50 ·5	51 ·7
3. 30	20. 59. 0	3. 6	·0941	5. 54	·02117	23. 0	51 ·0	52 ·2
3. 57	58. 40	3. 18	·0935	6. 9	·02102			
4. 55	59. 30	4. 12	·0935	7. 52	·02120			
6. 38	58. 0	4. 34	·0933	8. 17	·02131			
7. 20	58. 30	4. 59	·0934	9. 24	·02127			
10. 45	56. 35	5. 10	·0932	9. 32	·02195			
11. 0	57. 25	5. 51	·0935	11. 15	·02166			
12. 5	54. 50	7. 0	·0933	13. 6	·02165			
12. 44	55. 30	7. 23	·0936	15. 31	·02258			
12. 59	55. 30	10. 26	·0935	19. 50	·02380			
13. 9	55. 0	10. 56	·0940	21. 36	·02436			
13. 23	56. 45	11. 9	·0937	23. 59	·02487			
13. 50	54. 50	12. 40	·0936					
14. 5	56. 30	12. 51	·0942					
14. 53	57. 0	13. 7	·0937					
15. 2	55. 55	13. 46	·0941					
16. 1	56. 50	13. 56	·0936					
16. 15	56. 0	14. 12	·0940					
16. 18	56. 30	14. 47	·0941					
16. 29	56. 15	15. 0	·0944					
16. 45	54. 50	15. 8	·0940					
17. 2	56. 30		***					
17. 12	20. 56. 30	17. 5	·0944					
17. 37	21. 0. 10	17. 46	·0939					
17. 53	20. 58. 10	18. 15:	·0946					
18. 32	56. 10	18. 45:	·0943					
18. 44	57. 15	19. 11	·0947					
18. 54	56. 20		***					
20. 0	56. 50	23. 0	·0921					
20. 18	56. 10	23. 38	·0921					
21. 40	20. 57. 20		(†)					
23. 45	21. 3. 10							
23. 59	2. 50							
Feb. 19		Feb. 19		Feb. 19		Feb. 19		
0. 0	21. 2. 50		(†)	0. 0	·02487	0. 0	52 ·0	52 ·8
0. 11	2. 50	0. 44	·0923	5. 20	·02284	1. 0	52 ·9	53 ·2
0. 17	3. 55	2. 9	·0934	8. 3	·02235	2. 0	54 ·0	54 ·1
0. 34	2. 55	3. 0	·0937	11. 31	·02286	3. 0	54 ·5	54 ·5
2. 19	2. 0	3. 31	·0939	14. 29	·02232	6. 0	55 ·0	55 ·0
2. 30	3. 0	3. 48	·0935	16. 2	·02263	9. 0	54 ·0	54 ·5
2. 39	21. 2. 0	4. 15	·0939	20. 30	·02438	12. 0	53 ·5	53 ·6
3. 39	20. 59. 50	7. 10	·0937	22. 52	·02435	21. 0	52 ·0	53 ·8
8. 4	57. 15	8. 25	·0939		·02306	22. 0	52 ·6	54 ·0
9. 57	56. 45	8. 48	·0936	23. 59	·02265	23. 0	53 ·1	54 ·5
11. 37	56. 30	9. 12	·0939					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 19 h m	° ′ ″	Feb. 19 h m		h m		h m	°	°
13. 32	20. 57. 0	11. 45	·0933					
13. 51	58. 50	12. 58	·0935					
14. 19	55. 5	13. 21	·0934					
17. 7	54. 30	14. 5	·0941					
17. 23	56. 10	14. 57	·0936					
17. 33	53. 55	15. 18	·0938					
17. 44	55. 40	15. 33	·0937					
17. 57	54. 45	16. 57	·0941					
18. 31	54. 50	17. 7	·0944					
19. 24	56. 45	17. 19	·0941					
20. 51	56. 30	17. 55	·0947					
21. 36	59. 40	18. 29	·0946					
21. 46	20. 59. 0	19. 18	·0938					
23. 39	21. 4. 40	19. 38	·0939					
23. 59	4. 45	20. 37	·0934					
		21. 28	·0929					
		21. 52	·0931					
		22. 9	·0925					
		23. 20	·0921					
		23. 31	·0916					
		23. 49	·0920					
		23. 59	·0919					
Feb. 20		Feb. 20		Feb. 20		Feb. 20		
0. 0	21. 4. 50	0. 0	·0919	0. 0	·02265	0. 0	54 ·0	55 ·2
0. 9	5. 55	0. 29	·0918	3. 11	·02194	1. 0	54 ·2	54 ·8
0. 30	4. 55	0. 57	·0927	4. 57	·01965	3. 0	55 ·2	55 ·8
0. 50	5. 0	1. 3	·0920	5. 0	·02042	9. 0	53 ·0	54 ·6
0. 57	5. 50	1. 27	·0917	5. 29	·02006	21. 0	46 ·8	[illegible]
1. 29	4. 0	2. 10:	·0927	5. 32	·02108			
1. 43	4. 50	3. 20	·0922	6. 19	·02080			
2. 17	3. 35	4. 8	·0925	6. 31	·02110			
2. 43	3. 35	4. 34	·0919	8. 6	·02100			
3. 50	0. 0	5. 53	·0921	10. 55	·02227			
4. 22	21. 2. 20	6. 9	·0925	14. 39	·02343			
7. 3	20. 58. 30	6. 35	·0923	18. 17	·02808			
7. 29	58. 45	7. 14	·0929	20. 15	·02930			
10. 0	55. 30	7. 35	·0924	21. 6	·02902			
10. 17	55. 55	9. 7	·0932		·02806			
11. 12	46. 50	9. 22	·0938	22. 6	·02855			
11. 21	48. 45	9. 53	·0931	23. 59	·02860			
11. 36	50. 0	10. 9	·0934					
12. 14	51. 0	10. 38	·0926					
12. 39	49. 30	11. 9	·0932					
13. 24	54. 20	11. 52	·0930					
14. 6	49. 10	12. 19	·0933					
14. 24	49. 10	12. 40	·0930					
14. 34	51. 0	13. 38	·0942					
14. 47	51. 45	14. 8	·0937					
15. 5	51. 15	14. 34	·0943					
15. 45	53. 30	14. 45	·0939					
16. 30	57. 0	15. 12	·0939					
16. 45	56. 30	15. 34	·0943					
	***	15. 44	·0944					
20. 13	20. 59. 10	16. 0	·0939					
20. 15	21. 1. 50	17. 10	·0947					
20. 29	20. 58. 45	18. 6	·0949					
21. 4	21. 8. 45	18. 24	·0945					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 20		Feb. 20						
h m	° ′ ″	h m		h m		h m	°	°
21. 10	21. 7. 45	18. 46	·0946					
21. 17	9. 0	18. 53	·0944					
21. 35	8. 30	19. 8	·0946					
21. 40	9. 15	20. 11	·0935					
21. 54	7. 20	20. 16	·0938					
22. 2	7. 10	20. 22	·0925					
22. 37	12. 50	20. 38	·0933					
23. 15	7. 30	20. 45	·0931					
23. 28	8. 30	21. 0	·0930					
23. 43	5. 0	21. 15	·0933					
23. 51	6. 50	21. 41	·0921					
23. 58	6. 15		(†)					
Feb. 21		Feb. 21		Feb. 21		Feb. 21		
0. 0	21. 6. 30		(†)	0. 0	·02860	1. 0	51 ·0	51 ·6
0. 7	8. 0	1. 0	·0913*	1. 22	·02818	3. 0	54 ·2	54 ·7
0. 38	8. 35	1. 14	·0923	2. 7	·02762	9. 0	53 ·3	54 ·8
0. 54	9. 50	1. 31	·0913	2. 32	·02751	21. 0	49 ·3	51 ·7
1. 4	8. 25	1. 40	·0923	3. 1	·02673			
1. 12	12. 0	1. 53	·0927	3. 24	·02722			
1. 21	13. 10	2. 0	·0921	5. 3	·02468			
1. 31	13. 30	2. 16	·0919	6. 19	·02364			
1. 39	12. 55		(†)	7. 0	·02383			
2. 0	13. 0	3. 0	·0921*	7. 9	·02341			
2. 8	14. 50	3. 42	·0915	7. 22	·02350			
2. 17	14. 35	3. 59	·0933	7. 32	·02400			
2. 32	11. 5	4. 8	·0922	7. 46	·02292			
2. 51	6. 40	4. 18	·0931	8. 9	·02212			
2. 58	7. 0	4. 23	·0921	8. 19	·02227			
3. 9	6. 0	4. 42	·0934	8. 46	·02050			
3. 33	10. 35	5. 24	·0909	9. 10	·02043			
3. 45	9. 35	6. 5	·0933	9. 23	·02097			
3. 54	11. 10	6. 8	·0927	10. 6	·02102			
4. 5	8. 50	6. 20	·0927	10. 17	·02110			
4. 16	10. 0	6. 34	·0937	11. 40	·02060			
4. 49	8. 0	6. 50	·0904	11. 53	·02070			
5. 4	3. 40		(†)	12. 15	·02035			
5. 10	4. 10	7. 29	·0922	12. 25	·02046			
5. 33	3. 45	7. 34	·0936	12. 42	·02033			
5. 46	7. 0		(†)	13. 7	·02080			
6. 8	3. 20	8. 34	·0919	16. 43	·02281			
6. 15	21. 5. 0	8. 46	·1003	18. 48	·02385			
6. 40	20. 53. 35	8. 54	·0963	20. 1	·02422			
7. 10	21. 7. 0	9. 6	·0972	22. 21	·02533			
	(†)	9. 9	·0919	23. 59	·02582			
8. 45	21. 12. 10		(†)					
9. 21	20. 42. 50	9. 52	·0902					
9. 36	50. 0	9. 56	·0900					
9. 45	49. 0	10. 22	·0910					
9. 57	49. 50	10. 26	·0902					
10. 12	47. 10	10. 40	·0915					
10. 37	55. 15	11. 15	·0929					
10. 55	52. 0	11. 26	·0930					
11. 7	52. 15	11. 37	·0924					
11. 26	48. 20	11. 52	·0927					
12. 0	47. 10	11. 56	·0923					
12. 27	38. 0		(†)					
12. 41	42. 55	13. 52	·0916					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 21		Feb. 21						
h m	° ′ ″	h m		h m		h m	°	°
12. 50	20. 42. 0	14. 8	·0920					
13. 15	49. 10	17. 5	·0931					
13. 41	53. 30		(†)					
13. 58	54. 5	18. 55	·0934					
14. 30	56. 10	20. 6	·0931					
14. 59	56. 0	20. 32	·0927					
15. 12	56. 5	20. 38	·0928					
16. 56	58. 35	21. 6	·0925					
18. 39	57. 50	21. 26	·0922					
19. 45	56. 20	21. 50	·0921					
20. 12	56. 45	23. 20	·0921					
20. 20	55. 50	23. 52	·0916					
20. 31	55. 30	23. 59	·0918					
20. 36	56. 20							
20. 45	20. 56. 0							
	***							
23. 13	21. 0. 10							
23. 59	1. 25							
Feb. 22		Feb. 22		Feb. 22		Feb. 22		
0. 0	21. 1. 15	0. 0	·0918	0. 0	·02582	1. 0	51 ·8	52 ·7
0. 30	3. 0	0. 21	·0917	0. 35	·02574	3. 0	54 ·2	55 ·0
0. 54	2. 5	0. 37	·0920	1. 42	·02595	9. 0	54 ·0	56 ·0
1. 15	2. 35	0. 50	·0917	5. 19:	·02224	22. 35	50 ·2	52 ·8
1. 42	2. 5	2. 9	·0914	9. 3	·02073			
	***	2. 26	·0918	13. 12	·02052			
2. 8	1. 50	2. 58	·0919	13. 43	·02013			
2. 16	2. 5	3. 18	·0923	20. 28	·02236			
2. 59	2. 35	3. 32	·0921	23. 59	·02360			
3. 15	21. 0. 50	3. 41	·0923					
3. 27	20. 59. 50	3. 52	·0921					
4. 0	59. 0	4. 5	·0923					
6. 30	58. 20	4. 14	·0922					
6. 57	57. 50	6. 37	·0932					
8. 51	58. 10	7. 0	·0931					
11. 29	57. 30	8. 22	·0935					
12. 36	20. 57. 50	8. 42	·0934					
12. 53	21. 5. 45	11. 15	·0935					
13. 3	21. 4. 20	11. 48	·0936					
13. 30	20. 57. 5	11. 53	·0938					
13. 43	56. 0		***					
14. 2	55. 20	12. 37	·0937					
14. 30	56. 55	13. 2	·0934					
18. 49	58. 50	13. 22:	·0946					
19. 15	58. 0	13. 38	·0937					
20. 18	57. 40	14. 3	·0937					
20. 30	58. 0	14. 9	·0935					
20. 44	57. 15		***					
21. 2	58. 0	14. 52	·0933					
21. 16	57. 45	15. 23	·0936					
22. 26	58. 30	16. 36	·0937					
23. 2	20. 59. 55	17. 26	·0942					
23. 59	21. 1. 5	19. 15	·0945					
		20. 26	·0944					
		20. 38	·0942					
		20. 56	·0944					
		21. 7	·0941					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 22 h m		h m		h m	°	°
		22. 24	·0933					
		23. 59	·0925					
Feb. 23		Feb. 23		Feb. 23		Feb. 23		
0. 0	21. 1. 5	0. 0	·0925	0. 0	·02360	6. 45	52 ·0	53 ·0
1. 8	2. 0	0. 48	·0923	3. 38	·02384	21. 0	45 ·8	48 ·6
2. 14	2. 5	1. 15	·0925	8. 5	·02332			
3. 30	0. 50	4. 3	·0935	10. 22:	·02358			
3. 53	0. 45	5. 55	·0936	15. 27	·02691			
4. 30	0. 0	8. 7	·0936	19. 6	·02872			
5. 30	21. 0. 5	10. 52	·0939	21. 14	·03002			
7. 0	20. 59. 0	14. 34	·0945		·02848			
13. 44	57. 50	17. 39	·0948	22. 16	·02907			
17. 41	59. 0	20. 23	·0945		·02840			
	***	20. 39	·0943	22. 53	·02862			
20. 18	57. 0	20. 49	·0944	23. 23	·02843			
21. 56	59. 15	20. 54	·0941		(†)			
22. 21	59. 10		***					
22. 44	20. 59. 10	23. 15	·0951					
23. 16	21. 0. 50	23. 19	·0946					
23. 26	0. 10	23. 31	·0946					
23. 59	0. 5	23. 48	·0945					
		23. 59	·0948					
Feb. 24		Feb. 24		Feb. 24		Feb. 24		
0. 0	21. 0. 0	0. 0	·0948	0. 0	·02757	1. 0	47 ·8	49 ·7
1. 34	0. 50		***	4. 55:	·02573	3. 0	49 ·2	50 ·8
3. 15	0. 50	0. 53	·0945	7. 42	·02570	9. 0	47 ·6	49 ·3
4. 1	0. 10	1. 10	·0950	11. 51	·02676	21. 0	43 ·0	45 ·7
5. 10	21. 0. 35	1. 23	·0951	17. 57	·02839			
9. 9	20. 58. 10	3. 7	·0947	20. 37	·02874			
9. 45	58. 10	3. 38	·0947	20. 54	·02862			
9. 47	59. 0	4. 16	·0943	22. 13	·02841			
10. 2	57. 30	4. 30	·0943		·02797			
10. 30	56. 5	5. 55	·0946	22. 51	·02792			
10. 40	56. 10	6. 35	·0948		(†)			
10. 57	57. 10	8. 48	·0950					
11. 14	57. 10	9. 39	·0949					
11. 25	56. 50	9. 55	·0954					
12. 8	57. 45	10. 7	·0952					
12. 38	57. 55	10. 15	·0953					
13. 8	57. 30	10. 37	·0948					
15. 11	57. 30	11. 7	·0952					
15. 58	58. 10	11. 26	·0948					
16. 30	57. 50	12. 39	·0951					
17. 20	58. 10	17. 46	·0955					
17. 47	57. 0	19. 0	·0953					
19. 2	57. 30	19. 37	·0954					
19. 49	57. 55	20. 6	·0951					
20. 14	57. 30	21. 38	·0947					
21. 22	58. 5	22. 5	·0942					
21. 46	59. 25	22. 19	·0946					
22. 12	59. 0		***					
22. 43	20. 59. 40	23. 45	·0950					
22. 47	21. 0. 35		(†)					
23. 7	20. 59. 55							
23. 50	21. 0. 10							
	(†)							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 25 h m	° ′ ″ (†)	Feb. 25 h m	(†)	Feb. 25 h m		Feb. 25 h m	°	°
0. 5	21. 0. 20	0. 8	·0947	0. 0	·02557	1. 0	45 ·8	46 ·8
1. 35	0. 15	0. 18	·0947	2. 22	·02491	3. 0	47 ·8	48 ·2
1. 44	21. 0. 45	0. 38	·0945	5. 8	·02295	9. 0	46 ·0	47 ·0
2. 16	20. 59. 45	1. 15	·0946	8. 19	·02234	21. 0	41 ·2	44 ·5
2. 36	59. 55	1. 25	·0945	12. 26	·02289	22. 0	41 ·7	44 ·5
2. 51	59. 0	2. 7	·0945	19. 3	·02453	23. 0	41 ·9	44 ·5
3. 23	59. 20	2. 28	·0947	22. 15	·02577			
4. 23	58. 35	2. 49	·0941	22. 22	·02568			
6. 0	58. 45	3. 22	·0945	23. 59	·02597			
7. 15	58. 0	3. 37	·0941					
9. 3	57. 30	4. 55	·0942					
	***	6. 31	·0947					
14. 9	58. 15	8. 39	·0952					
15. 16	57. 35	10. 8	·0952					
	***	10. 40	·0952					
21. 1	56. 30	12. 22	·0955					
22. 50	20. 59. 0	16. 54	·0959					
23. 28	21. 0. 50	18. 23	·0960					
23. 59	1. 0	19. 19	·0958					
		20. 50	·0948					
		21. 3	·0947					
		21. 45	·0945					
		22. 38	·0946					
		23. 4	·0944					
		23. 28	·0944					
		23. 59	·0945					
Feb. 26		Feb. 26		Feb. 26		Feb. 26		
0. 0	21. 1. 5	0. 0	·0945	0. 0	·02597	0. 0	42 ·2	44 ·5
0. 27	1. 20	0. 35	·0945	1. 13	·02590	1. 0	43 ·2	44 ·5
1. 30	21. 0. 45	2. 10	·0952	2. 11	·02553	2. 0	43 ·6	45 ·0
3. 50	20. 57. 45	2. 51	·0950		·02378	3. 0	44 ·0	45 ·6
4. 47	57. 35	3. 10	·0953	6. 30:	·02250	6. 0	43 ·8	45 ·0
5. 28	58. 20	3. 22	·0950	12. 11	·02360	9. 0	42 ·0	44 ·0
7. 54	57. 35	3. 50	·0950	14. 31	·02365	12. 0	41 ·5	43 ·6
9. 49	58. 0	3. 56	·0949	20. 9	·02469	18. 0	41 ·0	43 ·0
12. 10	56. 55	4. 36	·0949	21. 50	·02468	21. 0	39 ·2	41 ·6
12. 36	57. 20	5. 8	·0952	23. 59	·02430	22. 0	39 ·5	41 ·6
13. 4	56. 35	5. 23	·0951			23. 0	39 ·8	42 ·0
15. 6	57. 0	5. 45	·0953					
19. 1	57. 0	6. 22	·0952					
20. 45	55. 10	6. 47	·0956					
21. 48	56. 55	7. 20	·0959					
21. 56	57. 45	7. 37	·0959					
22. 7	58. 5	8. 23	·0961					
22. 18	20. 58. 0	8. 49	·0960					
23. 9	21. 0. 30	9. 34	·0963					
23. 16	0. 30	9. 54	·0962					
23. 48	1. 5	10. 7	·0963					
23. 59	1. 25	10. 18	·0960					
		10. 56	·0960					
		11. 7	·0961					
		11. 30	·0959					
		12. 30	·0965					
		12. 54	·0964					
		16. 58	·0964					
		18. 18	·0966					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 26 h m		h m		h m	°	°
		18. 58	·0966					
		19. 20	·0965					
		19. 30	·0967					
		20. 8	·0963					
		20. 23	·0964					
		21. 15	·0960					
		21. 53	·0961					
		22. 10	·0959					
		23. 27	·0963					
		23. 59	·0962					
Feb. 27		Feb. 27		Feb. 27		Feb. 27		
0. 0	21. 1. 30	0. 0	·0962	0. 0	·02430	0. 0	40 ·0	42 ·6
1. 15	1. 5	1. 15	·0963	1. 56	·02427	1. 0	40 ·8	42 ·7
1. 29	21. 0. 20	1. 37	·0961	5. 22:	·02244	3. 0	42 ·6	43 ·2
3. 27	20. 58. 15	1. 54	·0964	8. 53	·02155	9. 0	43 ·8	44 ·1
5. 30	58. 55	2. 9	·0962	14. 46	·02166	21. 0	41 ·0	43 ·0
8. 15	56. 30	3. 9	·0962	19. 53	·02204			
11. 23	56. 30	3. 22	·0959	21. 53	·02253			
11. 45	57. 25	3. 43	·0962	23. 59	·02222			
13. 29	58. 0	6. 7	·0961					
13. 43	57. 20	6. 37	·0963					
14. 25	57. 15	7. 45	·0965					
14. 40	58. 45	7. 56	·0963					
15. 7	56. 10	9. 7	·0965					
15. 19	57. 15	9. 23	·0964					
15. 55	56. 50	10. 15	·0969					
17. 24	56. 45	10. 37:	·0967					
17. 52	55. 50	10. 54	·0969					
19. 6	56. 45	11. 9	·0966					
19. 15	57. 15	11. 32	·0967					
19. 42	56. 50	11. 47	·0971					
19. 59	55. 0	12. 0:	·0968					
20. 17	54. 35	12. 17	·0970					
20. 58	57. 10	12. 37	·0970					
21. 18	56. 0	12. 47	·0968					
21. 27	56. 45	13. 7	·0969					
21. 38	56. 5	13. 17	·0971					
21. 51	58. 15		***					
22. 7	59. 55	14. 15	·0971					
22. 15	20. 58. 15	14. 31	·0974					
23. 32	21. 2. 20	15. 8	·0970					
23. 45	4. 55	15. 39	·0973					
	(†)		***					
		16. 37	·0976					
		16. 45	·0976					
		17. 52	·0979					
		18. 45	·0978					
			***					
		19. 56	·0973					
		20. 5	·0970					
		20. 9	·0971					
		20. 23	·0966					
		20. 29	·0966					
		20. 38	·0961					
		21. 17	·0955					
		21. 34	·0961					
		21. 48	·0956					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Feb. 27 h m		h m		h m	°	°
		22. 8	·0948					
		22. 16	·0948					
		22. 24	·0945					
		22. 30	·0948					
		22. 37	·0944					
		22. 47	·0947					
		22. 55	·0943					
		23. 9	·0951					
		23. 59	·0957					
Feb. 28		Feb. 28		Feb. 28		Feb. 28		
0. 0	21. 5. 0	0. 0	·0957	0. 0	·02222	1. 0	43 ·0	44 ·5
0. 13	5. 0	0. 19	·0952	0. 55	·02185	3. 0	45 ·7	46 ·8
0. 15	6. 0	0. 28	·0958	1. 18	·02196	9. 0	43 ·2	46 ·6
0. 29	5. 20	0. 46	·0945	5. 2	·01930	21. 0	41 ·3	43 ·6
0. 38	7. 0	0. 52	·0946	6. 17	·01879			
0. 58	4. 50	1. 0	·0934	8. 30	·01914			
1. 2	4. 20	1. 23	·0949	10. 1	·01909			
1. 11	2. 0	1. 38	·0952	12. 9	·01840			
1. 33	3. 0	1. 51	·0957	13. 25	·01828			
1. 52	1. 45	2. 0	·0955	16. 1	·01970			
2. 8	1. 20	2. 11	·0959	18. 42	·02052			
3. 29	1. 20	2. 21	·0958	22. 47	·02100			
3. 49	0. 40	2. 35	·0957	23. 59	·02036			
4. 4	1. 10	3. 43	·0949					
4. 15	0. 10	4. 8	·0956					
5. 8	21. 0. 10	4. 15	·0952					
6. 0	20. 58. 45	5. 46	·0959					
6. 12	20. 57. 10	6. 0	·0955					
6. 30	21. 1. 30	6. 9	·0959					
6. 38	21. 0. 15	6. 24	·0949					
6. 49	20. 56. 30	6. 45:	·0930					
6. 59	57. 10	7. 0	·0935					
7. 15	57. 0	7. 7	·0934					
7. 27	55. 50	7. 18	·0941					
7. 45	56. 55	7. 23	·0932					
8. 6	55. 25	7. 37	·0939					
8. 19	58. 30	8. 6	·0926					
8. 36	51. 50	8. 22	·0932					
8. 43	53. 20	8. 30	·0920					
9. 1	48. 0	8. 38	·0927					
9. 5	48. 40	8. 52	·0915					
9. 45	42. 45	9. 0	·0918					
9. 56	44. 25	9. 36	·0919					
10. 7	44. 5	9. 47	·0915					
10. 27	41. 0	9. 55	·0924					
11. 7	47. 10	10. 14	·0903					
11. 13	46. 30	10. 25	·0919					
11. 30	50. 0	10. 36	·0915					
	(†)	11. 13	·0920					
12. 5	53. 30	11. 27	·0913					
12. 15	52. 30	11. 47	·0952					
12. 28	55. 30	11. 58	·0919					
12. 33	54. 30	12. 12	·0931					
12. 45	56. 10	12. 26	·0917					
12. 59	53. 45	12. 42	·0934					
13. 7	54. 55	13. 9	·0960					
13. 13	54. 30	13. 31	·0942					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 28		Feb. 28						
h m	° ′ ″	h m		h m		h m	°	°
13. 22	20. 50. 0	13. 37	·0944					
13. 48	53. 20	13. 58	·0932					
13. 52	54. 30	14. 5	·0933					
14. 6	57. 10	14. 9	·0931					
14. 15	20. 57. 20	14. 38	·0942					
14. 39	21. 4. 30	14. 52:	·0937					
15. 0	21. 3. 0	15. 0	·0938					
15. 59	20. 58. 25	15. 19	·0947					
16. 8	58. 45	15. 30	·0948					
16. 29	57. 25	15. 42	·0945					
17. 1	57. 30	16. 5	·0949					
17. 14	58. 15		***					
17. 21	57. 5	17. 10	·0952					
17. 36	58. 10	17. 22	·0948					
17. 58	57. 30	17. 28	·0951					
18. 30	58. 25		***					
19. 24	57. 0	18. 32	·0948					
19. 48	57. 45	19. 4	·0951					
19. 57	58. 55		***					
20. 16	57. 5	19. 40	·0939					
20. 24	58. 0	19. 55	·0942					
20. 31	57. 15	20. 15	·0937					
20. 37	57. 50	20. 22	·0940					
20. 43	56. 55	20. 30	·0934					
21. 15	20. 56. 35	20. 37	·0936					
22. 57	21. 1. 0	20. 42	·0934					
23. 25	1. 0	21. 34	·0936					
23. 45	1. 50	21. 40	·0937					
23. 59	2. 15		***					
		22. 41	·0927					
		22. 56	·0930					
		23. 25	·0929					
		23. 52	·0937					
			(†)					
Mar. 1		Mar. 1		Mar. 1		Mar. 1		
0. 0	21. 2. 15		(†)	0. 0	·02036	1. 0	44 ·2	45 ·5
0. 24	3. 15	1. 0	·0938*	1. 31	·02017	3. 0	45 ·8	47 ·2
1. 30	3. 25	3. 0	·0942*	4. 40	·01746	9. 0	43 ·4	45 ·5
2. 9	2. 20	3. 15	·0937	9. 28	·01804	21. 45	38 ·0	41 ·3
2. 17	2. 50	3. 51	·0938	17. 27	·02128			
2. 40	1. 20	4. 23	·0933	23. 7	·02317			
3. 30	21. 0. 0	4. 45	·0933	23. 59	·02340			
3. 55	20. 58. 45	5. 0	·0934					
4. 38	58. 0	5. 29	·0933					
	(†)	5. 50	·0937					
7. 27	57. 30	6. 26	·0936					
7. 48	57. 15	6. 41	·0939					
7. 50	57. 10	6. 56	·0938					
8. 20	57. 50	7. 38	·0941					
8. 57	57. 5	8. 15	·0938					
9. 23	57. 55	8. 30	·0940					
10. 15	56. 35	9. 16	·0940					
10. 43	56. 45	9. 34	·0939					
11. 19	57. 10	9. 46	·0940					
12. 7	56. 20	10. 53	·0938					
12. 35	56. 50	11. 52	·0942					
	(†)	12. 21:	·0939					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 1		Mar. 1						
h m	° ′ ″	h m		h m		h m	°	°
13. 45	20. 58. 20	12. 45	·0943					
17. 58	56. 35	13. 36	·0940					
19. 40	57. 0	14. 0	·0942					
19. 59	56. 10	14. 16	·0941					
21. 45	56. 50	16. 38	·0948					
22. 6	57. 0	18. 50	·0948					
22. 12	20. 57. 0	19. 11	·0950					
23. 25	21. 0. 5	19. 41	·0946					
23. 34	1. 25	20. 10	·0945					
23. 59	1. 50	21. 0	·0940					
		22. 5	·0936					
		22. 57	·0931					
		23. 8	·0929					
		23. 23	·0934					
		23. 33	·0932					
		23. 47	·0933					
		23. 59	·0932					
Mar. 2		Mar. 2		Mar. 2		Mar. 2		
0. 0	21. 1. 50	0. 0	·0932	0. 0	·02340	10. 15	42 ·0	43 ·7
0. 10	1. 50	0. 37	·0936	1. 43:	·02347	21. 0	36 ·0	38 ·2
0. 21	2. 45	0. 58	·0936	4. 55	·02164			
1. 0	2. 0	1. 13	·0939	10. 47:	·01978			
1. 20	2. 5	1. 48	·0942	16. 1	·02147			
1. 39	1. 10	1. 53	·0941	22. 52	·02558			
1. 51	21. 1. 30		***	23. 59	·02566			
4. 8	20. 57. 35	3. 38	·0941					
5. 48	57. 0	4. 34	·0939					
6. 23	58. 0	6. 37	·0944					
7. 30	57. 0	7. 25	·0943					
7. 44	55. 55	8. 10	·0946					
8. 0	56. 30	13. 4	·0948					
8. 13	56. 5	17. 11	·0953					
8. 21	56. 30	19. 2	·0951					
8. 57	57. 0	20. 4	·0952					
9. 15	56. 40	20. 37	·0948					
10. 10	57. 10	21. 25	·0947					
10. 20	57. 0	21. 47	·0945					
12. 45	57. 40		***					
12. 58	58. 0	22. 46	·0946					
	***	23. 5	·0943					
16. 8	57. 55	23. 59	·0945					
19. 59	58. 10							
20. 16	57. 30							
21. 47	59. 20							
21. 58	20. 58. 55							
22. 0	21. 0. 15							
22. 8	20. 59. 45							
22. 50	21. 1. 5							
23. 6	0. 30							
23. 25	1. 45							
23. 50	1. 35							
23. 59	1. 40							
Mar. 3		Mar. 3		Mar. 3		Mar. 3		
0. 0	21. 1. 50	0. 0	·0945	0. 0	·02566	1. 0	39 ·2	40 ·5
0. 24	1. 55	0. 42	·0937	1. 1	·02572	3. 0	41 ·8	43 ·0
0. 35	2. 10	2. 37	·0956	2. 17	·02474	9. 0	40 ·0	43 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 3		Mar. 3		Mar. 3		Mar. 3		
h m	° ′ ″	h m		h m		h m	°	°
1. 4	21. 1. 45	3. 24	·0963	5. 11:	·02163	21. 0	31·8	35·2
1. 13	2. 30		(†)	8. 47	·02058			
1. 36	2. 10	4. 21	·0957	11. 2	·02038			
1. 43	21. 2. 40	7. 6	·0955	13. 46	·02165			
3. 26	20. 59. 0	7. 45	·0959	16. 3	·02304			
4. 3	58. 35	8. 25:	·0953	18. 12	·02481			
5. 15	59. 15	8. 52	·0959	19. 44	·02596			
6. 27	58. 50	9. 14	·0960		·02528			
7. 21	56. 10	9. 23	·0962	21. 37	·02698			
7. 58	57. 35	10. 21	·0963	23. 45	·02640			
8. 15	57. 50	11. 7	·0960	23. 50	·02614			
8. 50	57. 25	11. 42	·0964	23. 59	·02621			
9. 37	57. 45	11. 56	·0962					
13. 32	57. 35	14. 29	·0965					
13. 45	58. 0	15. 25	·0974					
14. 7	57. 10	17. 4	·0967					
14. 13	57. 45	18. 4	·0976					
14. 30	57. 15	18. 45	·0975					
15. 0	56. 5	19. 12	·0977					
15. 15	55. 40	20. 0	·0971					
15. 43	56. 55	20. 22	·0973					
16. 7	58. 40	21. 8	·0967					
16. 29	58. 45	21. 38	·0959					
17. 17	56. 50	21. 56	·0961					
17. 35	57. 0		(†)					
17. 48	56. 15							
18. 57	57. 0							
19. 15	56. 45							
19. 52	57. 0							
20. 13	58. 10							
20. 30	58. 0							
20. 39	56. 55							
20. 53	20. 56. 55							
21. 44	21. 3. 5							
22. 13	4. 0							
	(†)							
23. 28	6. 10							
23. 44	5. 20							
23. 59	6. 50							
Mar. 4		Mar. 4		Mar. 4		Mar. 4		
0. 0	21. 7. 0		(†)	0. 0	·02621	1. 0	36·0	38·0
0. 15	8. 0	1. 0	·0972	1. 2	·02597	3. 0	40·2	42·7
0. 28	7. 45	1. 50	·0958	1. 56	·02538	9. 0	41·6	43·7
1. 4	7. 0	2. 2	·0962	10. 29:	·01728	21. 0	34·0	36·8
1. 43	3. 20	2. 22	·0955	19. 57	·02205	22. 0	34·8	37·2
1. 52	5. 0	2. 47	·0955	22. 33	·02377	23. 0	36·5	38·6
2. 14	2. 50	3. 36	·0960	23. 59	·02296			
2. 45	21. 1. 50	4. 37	·0963					
3. 7	20. 59. 55	5. 15	·0960					
3. 17	59. 55	5. 25	·0960					
3. 30	59. 0	5. 53	·0956					
3. 43	59. 0	8. 45	·0956					
4. 0	58. 5	9. 3	·0958					
5. 6	57. 50	9. 25	·0957					
6. 6	58. 0	9. 49	·0958					
7. 41	57. 5	11. 37	·0959					
8. 15	56. 30	11. 58	·0958					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 4		Mar. 4						
h m	° ′ ″	h m		h m		h m	°	°
9. 18	20. 56. 50	12. 6	·0958					
11. 3	57. 35	12. 17	·0966					
11. 22	57. 5	12. 40	·0958					
12. 14	57. 0	13. 22	·0960					
12. 38	55. 55	13. 57	·0959					
13. 20	57. 20	15. 44	·0962					
14. 45	58. 15	16. 53	·0959					
15. 15	58. 0	18. 22	·0957					
15. 31	57. 30	19. 52	·0950					
16. 5	58. 0	20. 38	·0945					
17. 0	58. 0		(†)					
20. 6	54. 10	21. 0	·0948*					
20. 12	53. 55	21. 38	·0939					
20. 27	53. 55	22. 37	·0935					
21. 53	58. 45	23. 15	·0943					
22. 5	20. 59. 0	23. 37	·0945					
22. 15	21. 0. 0	23. 59	·0943					
23. 15	2. 0							
23. 59	2. 0							
Mar. 5		Mar. 5		Mar. 5		Mar. 5		
0. 0	21. 1. 50	0. 0	·0943	0. 0	·02296	0. 0	37·8	39·8
1. 11	2. 0	1. 42	·0951	1. 43	·02087	1. 0	40·0	41·7
2. 16	21. 1. 0	2. 0	·0955	3. 34	·01720	2. 0	41·7	43·6
2. 58	20. 59. 15	2. 23	·0944	6. 4	·01707	3. 0	44·0	45·8
4. 14	57. 45	3. 15	·0944	9. 16	·01740	6. 0	43·5	45·0
		3. 32	·0936	11. 7	·01784	9. 0	43·0	44·0
9. 16	57. 50	3. 40	·0937	15. 23:	·02063	12. 0	42·2	43·0
9. 29	59. 0	4. 12	·0931	18. 52	·01997	18. 0	45·5	47·7
10. 6	55. 30	4. 35	·0934	19. 38	·01962	21. 0	47·3	49·8
10. 22	56. 20	6. 25	·0931	21. 18	·01860	22. 0	49·0	50·7
10. 40	55. 50	8. 16	·0938	21. 22	·01842	23. 0	50·0	52·1
10. 57	56. 0	8. 53	·0937	22. 36	·01757			
11. 2	57. 0	9. 15	·0941	22. 42	·01761			
11. 28	54. 50	9. 30	·0936	22. 50	·01745			
11. 44	53. 55	10. 0	·0938	22. 55	·01680			
12. 6	53. 50	10. 24:	·0936	23. 59	·01629			
12. 46	55. 45	11. 0	·0943					
13. 23	57. 30	11. 11	·0941					
13. 43	57. 30	11. 30	·0945					
13. 57	58. 5	12. 5	·0940					
14. 47	57. 5	13. 16	·0945					
15. 0	58. 10	13. 30	·0945					
16. 22	57. 50	13. 45	·0949					
16. 30	57. 0	14. 1	·0949					
16. 52	56. 55	15. 20	·0956					
17. 24	57. 55	15. 49	·0956					
19. 22	55. 55	16. 31	·0958					
19. 28	53. 50	17. 21	·0956					
19. 33	53. 30	17. 55	·0958					
19. 44	55. 20	18. 28	·0958					
20. 13	54. 45	19. 24	·0954					
20. 20	54. 10	19. 44	·0956					
20. 30	56. 0	20. 23	·0942					
20. 39	55. 25	20. 31	·0942					
20. 56	57. 0	20. 41	·0938					
21. 4	56. 0	20. 52	·0940					
21. 24	57. 5	21. 5	·0938					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 5		Mar. 5						
h m	° ′ ″	h m		h m		h m	°	°
21. 35	20. 56. 50	21. 30	·0940					
21. 40	53. 0	21. 38	·0931					
21. 45	20. 56. 30	21. 58	·0937					
22. 15	21. 3. 35	22. 15	·0946					
22. 20	2. 30	22. 25	·0933					
22. 29	3. 50	22. 35	·0922					
22. 33	2. 0	22. 43	·0929					
22. 40	4. 30	22. 49	·0919					
22. 47	1. 30		(†)					
23. 14	12. 30	23. 3	·0923					
23. 18	10. 30	23. 20	·0889					
23. 30	16. 0	23. 30	·0915					
	(†)	23. 35	·0909					
			***					
		23. 41	·0909					
		23. 49	·0902					
		23. 59	·0906					
Mar. 6		Mar. 6		Mar. 6		Mar. 6		
	(†)	0. 0	·0906	0. 0	·01629	0. 0	51·0	53·2
0. 45	21. 11. 0	0. 9	·0907	0. 30	·01623	1. 0	52·0	53·2
1. 15	12. 0	0. 20	·0915	1. 5	·01676	2. 0	53·3	54·0
1. 30	17. 0	0. 33	·0922		·01770	3. 0	54·8	54·7
1. 53	7. 0	0. 41	·0917	1. 50	·01826	9. 0	54·5	54·6
2. 0	9. 10	0. 50	·0924		·02030	21. 0	51·8	53·2
2. 9	8. 0	0. 57	·0920	2. 17	·02024			
2. 46	13. 0	1. 4	·0922		·02130			
3. 36	4. 0	1. 9	·0914	3. 3	·02058			
3. 46	3. 20	1. 16	·0914	3. 47	·02146			
4. 2	3. 45	1. 37	·0962	4. 20	·02163			
4. 13	1. 45	1. 56	·0928	5. 32	·02257			
4. 18	3. 5	2. 14	·0938	5. 49	·02365			
4. 32	0. 15	2. 22	·0938	6. 13	·02320			
5. 1	2. 0	2. 39	·0952	7. 40	·02266			
5. 12	3. 15	2. 47	·0949	7. 45	·02245			
5. 29	1. 30	2. 52	·0950	9. 0	·02200			
5. 38	21. 5. 55	3. 35	·0923	9. 10	·02208			
6. 0	20. 58. 25	3. 52	·0926	9. 16	·02176			
6. 10	59. 45	4. 7	·0937	9. 30	·02194			
6. 20	54. 55	4. 15	·0933	9. 52	·02080			
6. 30	20. 56. 25	4. 20	·0927	10. 6	·02138			
6. 45	21. 2. 35	4. 24	·0933	10. 40	·02110			
6. 57	20. 58. 20	4. 37	·0924	12. 32	·02218			
7. 8	21. 2. 20	4. 51	·0939	13. 39	·02227			
7. 15	0. 50	5. 14	·0940	18. 35	·02535			
7. 28	21. 0. 10	5. 19	·0937	20. 55	·02610			
7. 31	20. 55. 30		(†)	23. 59	·02552			
7. 38	57. 0	5. 45	·0908					
7. 44	20. 55. 50	5. 53	·0896					
8. 10	21. 7. 25	6. 5	·0911					
8. 13	20. 53. 55	6. 11	·0910					
8. 23	57. 0	6. 22	·0922					
8. 33	50. 50	6. 28	·0920					
9. 0	48. 20	6. 41	·0923					
9. 7	49. 10	6. 53	·0915					
9. 14	48. 10	7. 8	·0930					
9. 23	49. 35	7. 12	·0926					
9. 40	44. 50	7. 22	·0931					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 6		Mar. 6						
h m	° ′ ″	h m		h m		h m	°	°
9. 49	20. 46. 20	7. 25	·0929					
10. 0	50. 0	7. 35	·0936					
10. 7	47. 20	7. 39	·0934					
10. 15	56. 45	7. 47	·0941					
10. 33	47. 10	7. 52	·0935					
10. 45	50. 15	8. 0	·0942					
10. 59	52. 40	8. 5	·0939					
11. 0	52. 10	8. 10	·0948					
11. 8	56. 15	8. 21	·0912					
11. 18	54. 10	8. 26	·0930					
11. 30	49. 10	8. 38	·0915					
11. 42	51. 55	8. 40	·0916					
11. 48	50. 20	9. 0	·0910					
11. 59	53. 20	9. 8	·0915					
12. 3	52. 0	9. 16	·0907					
12. 13	54. 20	9. 28	·0916					
12. 15	53. 10	9. 35	·0908					
12. 27	53. 0	9. 43	·0918					
12. 37	55. 55	9. 50	·0906					
12. 45	20. 54. 55	9. 53	·0910					
13. 13	21. 0. 0	10. 4	·0918					
13. 28	20. 58. 0	10. 23	·0910					
13. 35	59. 0	10. 47	·0948					
13. 46	58. 55	10. 54	·0946					
14. 15	56. 10	11. 6	·0928					
14. 40	57. 15	11. 11	·0921					
15. 17	55. 55	11. 21	·0929					
15. 40	56. 55	11. 34	·0930					
15. 50	58. 10	11. 41	·0935					
16. 9	57. 10	11. 50	·0932					
17. 14	56. 35	11. 55	·0936					
17. 16	57. 10	12. 4	·0930					
18. 10	57. 15	12. 10	·0935					
18. 22	58. 55	12. 25	·0933					
18. 39	58. 15	12. 35	·0937					
19. 17	59. 50	12. 58	·0955					
19. 28	58. 45		***					
20. 21	58. 20	13. 28	·0943					
20. 39	59. 30	13. 35	·0945					
20. 49	20. 59. 30	13. 50	·0941					
21. 19	21. 1. 40		***					
21. 33	1. 5	14. 46	·0940					
21. 55	3. 15	15. 1	·0945					
22. 11	3. 20	15. 49	·0940					
23. 59	9. 35	16. 28	·0950					
		16. 41	·0950					
		17. 8	·0943					
		18. 10	·0937					
		18. 20	·0935					
		18. 30	·0928					
		18. 45	·0927					
		18. 52	·0925					
		19. 10	·0930					
		19. 19	·0929					
		19. 26	·0933					
		20. 30	·0928					
		20. 38	·0925					
		20. 48	·0925					
		21. 32	·0919					

For the Horizontal and Vertical Forces, increasing Readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Mar. 6	
21. 50	
22. 41	
23. 37	
23. 59	
Mar. 7	
0. 0	21. 9. 40
0. 19	9. 30
	(†)
4. 0	4. 10
4. 18	1. 15
4. 45	21. 1. 25
5. 14	20. 59. 55
5. 23	21. 0. 10
5. 45	21. 0. 0
6. 38	20. 57. 35
7. 11	59. 0
7. 28	20. 58. 45
	***
7. 57	21. 0. 10
8. 7	21. 0. 10
8. 20	20. 59. 10
8. 34	21. 0. 30
9. 2	20. 59. 10
10. 5	57. 55
10. 13	58. 30
11. 27	57. 0
11. 42	54. 15
11. 52	55. 55
12. 8	54. 35
12. 26	55. 55
12. 44	51. 55
12. 53	53. 0
13. 15	50. 20
13. 27	52. 0
13. 47	53. 10
14. 7	55. 55
14. 56	53. 10
15. 25	55. 55
15. 30	56. 20
15. 58	56. 0
17. 13	58. 50
17. 43	56. 55
17. 53	56. 50
18. 18	58. 5
19. 14	57. 45
19. 56	58. 45
20. 5	57. 50
20. 25	57. 25
20. 38	59. 0
20. 51	59. 0
20. 58	59. 45
21. 5	20. 59. 30
21. 14	21. 0. 15
21. 21	0. 0
22. 8	0. 40
22. 27	2. 15
22. 55	3. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
21. 50	·0925
22. 41	·0921
23. 37	·0929
23. 59	·0935
Mar. 7	
0. 0	·0935
0. 20	·0935
0. 43	·0927
1. 5	·0933
1. 35	·0934
2. 32	·0935
2. 44	·0937
2. 54	·0936
3. 7	·0939
3. 42	·0940
3. 54	·0938
4. 7	·0927
4. 27	·0941
5. 9	·0934
5. 36	·0936
5. 59	·0935
6. 23	·0929
6. 52	·0936
7. 0	·0934
7. 6	·0933
7. 15	·0927
7. 48	·0928
7. 54	·0931
8. 9	·0928
8. 31	·0934
8. 45	·0932
9. 44	·0938
10. 38	·0941
11. 6	·0940
11. 38	·0970
12. 20	·0938
12. 37	·0943
13. 28	·0936
14. 8	·0942
14. 38	·0945
15. 19	·0943
15. 53	·0945
16. 22	·0944
17. 8	·0945
17. 25	·0947
17. 54	·0942
18. 10	·0944
18. 20	·0942
19. 2	·0941
19. 23	·0936
20. 3	·0932
20. 20	·0932
20. 44	·0930
21. 52	·0920
22. 25	·0925
23. 7	·0925
23. 30	·0920

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Mar. 7	
0. 0	·02552
1. 53	·02484
2. 49	·02438
3. 55	·02310
6. 12	·02135
	·02166
8. 2	·02157
9. 56	·02135
11. 35	·02163
12. 1	·02147
13. 56	·02218
14. 32	·02227
19. 37	·02480
22. 22	·02552
23. 59	·02518

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 7		
1. 0	54·6	55·1
3. 0	56·0	56·5
9. 0	55·0	56·0
21. 0	52·7	53·8

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Mar. 7	
23. 3	21. 5. 0
23. 15	4. 55
23. 26	21. 0. 15
23. 42	20. 59. 50
23. 59	21. 1. 30
Mar. 8	
0. 0	21. 1. 30
0. 17	2. 35
0. 30	1. 0
1. 8	3. 30
1. 14	3. 45
2. 0	0. 10
2. 10	21. 1. 35
2. 37	20. 59. 0
3. 34	21. 0. 35
3. 45	21. 0. 15
4. 6	20. 58. 35
4. 24	58. 55
5. 0	57. 15
5. 14	53. 10
5. 18	53. 15
5. 36	56. 10
5. 53	56. 35
6. 32	55. 20
6. 45	56. 15
7. 14	56. 20
8. 13	54. 45
8. 30	55. 30
9. 3	53. 50
9. 32	54. 45
10. 49	54. 40
11. 44	54. 0
13. 0	53. 55
	(†)
14. 23	54. 40
14. 35	55. 0
15. 0	54. 10
15. 28	52. 55
15. 55	53. 45
16. 33	58. 45
16. 50	56. 45
16. 58	56. 35
17. 26	54. 5
18. 48	54. 10
19. 7	53. 30
19. 26	54. 15
20. 23	54. 0
20. 59	54. 20
21. 28	57. 10
22. 2	58. 45
22. 33	59. 0
22. 47	20. 58. 50
23. 9	21. 2. 45
23. 42	1. 0
23. 59	1. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Mar. 7	
23. 37	·0925
23. 43	·0925
23. 59	·0926
Mar. 8	
0. 0	·0926
0. 22	·0928
0. 32	·0925
0. 39	·0927
1. 9	·0930
1. 40	·0908
1. 56	·0922
2. 23	·0934
2. 33	·0932
2. 48	·0938
3. 2	·0936
3. 25:	·0942
3. 36	·0940
4. 39	·0936
4. 51	·0934
5. 0	·0930
5. 9	·0941
5. 15	·0941
5. 22	·0945
5. 51	·0939
6. 2	·0941
6. 14	·0940
6. 22	·0941
6. 45	·0939
6. 58	·0941
7. 14	·0940
7. 29	·0943
8. 8	·0943
8. 22	·0942
8. 44	·0946
9. 7	·0945
9. 55:	·0939
11. 0	·0942
11. 29	·0937
12. 30	·0935
12. 41	·0936
13. 0	·0932
13. 38	·0941
13. 56	·0937
14. 19	·0941
14. 28	·0941
	(†)
15. 38	·0941
16. 0	·0939
16. 21	·0933
16. 54	·0945
17. 39	·0945
18. 22	·0950
	(†)
19. 7	·0946
19. 15	·0947

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Mar. 8	
0. 0	·02518
3. 30	·02193
	·02224
4. 20	·02127
4. 23	·02160
4. 58	·02124
5. 28	·02142
6. 3	·02138
7. 29	·02162
8. 0	·02144
8. 12	·02175
8. 43	·02158
11. 11	·02130
11. 18	·02135
	·02256
12. 38	·02263
13. 57	·02322
14. 56	·02420
17. 15	·02573
18. 21	·02674
23. 59	·03003

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 8		
1. 0	56·3	56·6
3. 0	57·3	58·8
9. 0	58·5	58·0
22. 20	51·5	52·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar. 8 h m		h m		h m	°	°
		19. 40	·0942					
		20. 37	·0938					
		20. 54	·0938					
		22. 5	·0927					
			(†)					
		23. 47	·0938					
		23. 59	·0931					
Mar. 9		Mar. 9		Mar. 9		Mar. 9		
0. 0	21. 1. 50	0. 0	·0931	0. 0	·03003	8. 0	51 ·5	52 ·0
0. 9	1. 35		***	1. 52.	·03056	21. 0	50 ·0	51 ·0
0. 34	2. 0	1. 37	·0944	4. 5	·03082			
0. 57	4. 10	2. 9	·0941	20. 7	·03014			
1. 30	2. 30	2. 22	·0944	21. 43	·02956			
1. 36	2. 55	2. 34	·0938		·02584			
1. 45	2. 50	2. 58	·0946	23. 59	·02552			
1. 58	1. 45	3. 19	·0943					
2. 1	1. 55		***					
2. 15	1. 15	4. 5	·0943					
2. 22	1. 55	4. 22	·0945					
2. 47	0. 10	5. 3	·0937					
3. 22	0. 45	5. 36	·0947					
3. 39	0. 10	5. 43	·0946					
3. 57	21. 0. 0	6. 30	·0947					
4. 39	20. 55. 40	6. 55	·0948					
4. 50	55. 40	7. 13	·0951					
5. 10	56. 30	8. 24	·0949					
6. 38	56. 35	8. 37	·0953					
6. 54	56. 5	8. 52	·0953					
7. 45	55. 15	9. 20	·0955					
8. 8	52. 45	9. 31	·0955					
8. 33	54. 5	9. 40	·0952					
8. 48	53. 15	10. 15	·0955					
9. 5	53. 15	10. 44	·0951					
9. 17	54. 0	11. 13	·0952					
9. 54	53. 40	11. 52	·0954					
10. 24	54. 55	11. 49	·0952					
10. 41	54. 50	14. 52	·0952					
11. 2	55. 10	17. 5	·0955					
12. 9	54. 45	18. 55	·0952					
12. 19	55. 0	20. 30	·0944					
13. 32	54. 55	22. 23	·0940					
14. 20	55. 10	23. 9	·0945					
19. 45	53. 55	23. 26	·0943					
19. 56	53. 5		(†)					
20. 27	52. 55							
20. 38	54. 0							
21. 17	54. 20							
23. 0	20. 58. 50							
23. 54	21. 1. 0							
23. 59	0. 55							
Mar. 10		Mar. 10		Mar. 10		Mar. 10		
0. 0	21. 0. 40		(†)	0. 0	·02552	1. 0	52 ·0	53 ·4
0. 30	1. 10	1. 0	·0949*	2. 15	·02423	3. 0	53 ·8	54 ·6
0. 51	0. 50	1. 31	·0950	3. 13	·02396	9. 0	53 ·6	54 ·5
0. 57	1. 0	2. 8	·0954	5. 46	·02170	21. 0	48 ·0	49 ·8
1. 34	21. 1. 50	2. 50	·0945	7. 40	·02058			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 10		Mar. 10		Mar. 10				
h m	° ′ ″	h m		h m		h m	°	°
2. 15	20. 59. 25	3. 24	·0954	10. 10	·01972			
2. 30	59. 40	3. 46	·0947	11. 14	·02004			
3. 30	58. 35	4. 4	·0948	15. 45	·02348			
3. 55	57. 0	4. 10	·0947	20. 57	·02658			
4. 10	57. 5	4. 21	·0950	22. 13	·02693			
4. 35	56. 0	5. 8	·0943		·02506			
4. 57	56. 0	5. 53	·0944	23. 10	·02484			
5. 10	56. 30	6. 20	·0942		·02438			
5. 45	55. 20	6. 38	·0942	23. 59	·02424			
6. 0	55. 50	7. 21	·0941					
6. 25	55. 10	7. 50	·0943					
6. 30	55. 35	8. 6	·0939					
6. 45	55. 40	8. 16	·0941					
6. 53	55. 10	8. 23	·0940					
7. 10	55. 15	9. 7	·0950					
7. 18	56. 0	9. 22	·0955					
7. 30	55. 15	9. 38	·0951					
8. 4	55. 15	9. 52	·0952					
8. 17	54. 50	10. 22	·0949					
8. 23	55. 0	10. 37	·0951					
8. 35	54. 0	10. 48	·0950					
8. 47	54. 45	11. 0	·0951					
9. 10	54. 30	11. 23	·0948					
9. 21	55. 0	12. 5	·0953					
9. 31	54. 55	12. 19	·0952					
10. 10	55. 10	13. 15	·0956					
10. 29	55. 0	13. 34	·0955					
10. 43	56. 5	15. 26	·0962					
11. 7	55. 0	15. 38	·0960					
12. 29	55. 15	16. 52	·0958					
12. 39	56. 0	17. 16	·0958					
13. 15	55. 0	17. 25	·0960					
14. 40	55. 15	18. 34	·0958					
14. 54	55. 0	18. 48	·0956					
15. 2	55. 5	18. 57	·0958					
15. 53	54. 15	19. 52	·0953					
16. 52	54. 10	20. 49	·0946					
17. 3	54. 15	21. 8	·0946					
17. 43	53. 20	21. 22	·0944					
17. 55	53. 40	21. 37	·0945					
18. 14	52. 50	22. 24	·0946					
18. 33	53. 0	22. 55	·0947					
19. 15	52. 5	23. 41	·0951					
19. 45	52. 30		(†)					
22. 0	59. 25							
22. 22	20. 59. 10							
22. 45	21. 1. 5							
23. 17	2. 0							
23. 24	2. 50							
23. 41	2. 30							
	(†)							
Mar. 11		Mar. 11		Mar. 11		Mar. 11		
	(†)		(†)	0. 0	·02424	1. 0	51 ·2	51 ·6
0. 14	21. 3. 50	0. 15	·0949	1. 48	·02360	3. 0	53 ·0	53 ·6
0. 23	3. 15	1. 7	·0948	5. 49	·02134	9. 0	54 ·0	54 ·5
0. 45	4. 0	1. 30	·0950	7. 22	·02075	21. 0	51 ·6	53 ·2
1. 18	3. 35	1. 43	·0950	10. 39	·02013	22. 0	53 ·0	53 ·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 11		Mar. 11		Mar. 11		Mar. 11		
h m	° ′ ″	h m		h m		h m	°	°
1. 49	21. 3. 55	2. 11	·0947	11. 56	·01944	23. 0	53·6	54·3
2. 8	2. 0	2. 50	·0951	12. 59	·01948			
2. 33	1. 15	4. 11	·0950	13. 25	·01924			
2. 50	1. 35	6. 22	·0951	16. 2	·01955			
3. 5	1. 10	6. 59	·0952	18. 35	·02028			
3. 13	21. 1. 30	7. 22	·0956	21. 57	·02135			
3. 11	20. 59. 10	7. 53:	·0953	23. 59	·02046			
5. 15	58. 30	8. 12	·0958					
5. 51	58. 50	8. 49	·0955					
7. 0	58. 30	9. 5	·0956					
7. 23	59. 10	9. 30	·0956					
8. 8	58. 25	9. 54:	·0954					
8. 35	58. 30	10. 3	·0959					
9. 30	56. 0	10. 49:	·0955					
9. 36	56. 10	11. 37	·0970					
9. 57	55. 15	11. 59	·0962					
10. 43	56. 20	12. 15	·0961					
10. 57	59. 5	12. 39	·0956					
11. 13	59. 30	13. 7	·0972					
11. 20	58. 55	13. 37	·0962					
11. 35	59. 10	14. 53	·0958					
12. 30	53. 20	15. 22	·0954					
12. 47	54. 10	15. 38	·0953					
13. 18	59. 25	16. 2	·0957					
13. 51	55. 30	16. 22	·0958					
14. 12	54. 55	17. 7	·0966					
14. 43	52. 50	17. 23:	·0961					
15. 1	52. 10	17. 56:	·0971					
15. 45	53. 0	18. 28:	·0965					
16. 40	52. 0	18. 51:	·0968					
17. 0	53. 55	19. 42	·0949					
17. 8	54. 0	20. 15	·0944					
17 51	56. 50	20. 32	·0939					
18 43	54. 55	20. 41	·0939					
19. 19	56. 55	21. 22	·0932					
20. 0	20. 55. 0	21. 37	·0937					
20. 32	21. 0. 45	22. 23	·0935					
20. 37	0. 50		***					
20. 45	2. 5	23. 47	·0946					
20. 46	1. 50		(†)					
20. 56	2. 35							
21. 29	0. 15							
22. 7	5. 0							
22. 30	4. 20							
23. 24	4. 25							
23. 30	5. 15							
23. 43	4. 10							
23. 59	5. 20							
Mar. 12		Mar. 12		Mar. 12		Mar. 12		
0. 0	21. 5. 50		(†)	0. 0	·02046	0 0	54·0	55·0
0. 31	6. 0	0. 7	·0943	0. 41	·02024	1. 0	54·6	55·5
0. 47	3. 30	0. 15	·0940	1. 2	·02033	2. 0	54·6	55·6
0. 52	3. 10	0. 34	·0943	2. 56	·01924	3. 0	54·8	55·6
1. 0	4. 55	0. 47	·0936	3. 33	·01915	6. 0	55·0	56·0
1. 14	3. 55	1. 2	·0942	4. 7	·01874	9. 0	53·5	55·2
1. 18	4. 35	1. 22	·0937	4. 31	·01860	12. 0	53·0	53·9
1. 38	4. 5	1. 36	·0940	6. 12	·01738	18. 0	46·0	47·3

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 12		Mar. 12		Mar. 12		Mar. 12		
h m	° ′ ″	h m		h m		h m	°	°
1. 51	21. 4. 55	1. 45	·0937	7. 1	·01723	21. 0	48·0	50·3
2. 10	3. 35	2. 7	·0940	7. 18	·01737	22. 0	48·3	50·5
2. 15	4. 30	2. 11	·0937	7. 54	·01696	23. 0	49·3	51·0
2. 27	4. 10	2. 37	·0940	10. 13	·01755			
2. 57	1. 15	3. 7	·0935	15. 8	·01980			
3. 11	2. 45	3. 31:	·0942	18. 41	·02185			
3. 30	2. 45	3. 43	·0940	21. 53	·02313			
3. 41	0. 30	3. 55	·0929	23. 59	·02290			
3. 54	0. 50	4. 34	·0931					
4. 8	21. 0. 0	4. 49	·0936					
4. 45	20. 55. 10	5. 17	·0942					
4. 59	55. 10	5. 30	·0939					
5. 12	56. 10	5. 46	·0942					
5. 23	56. 5	6. 0	·0937					
5. 44	55. 30	6. 29:	·0945					
5. 59	57. 5	7. 9	·0930					
6. 32	54. 55	7. 32	·0969					
6. 43	56. 10	7. 47	·0969					
6. 45	56. 10	8. 8	·0935					
6. 54	57. 0	8. 22:	·0941					
7. 8	53. 10	8. 37	·0923					
7. 15	40. 0	9. 2	·0938					
7. 19	37. 10	9. 11	·0940					
7. 47	49. 20	9. 38	·0944					
8. 10	44. 35	10. 20	·0939					
8. 32	54. 40	10. 30	·0941					
8. 44	53. 0	10. 41	·0939					
9. 5	54. 50	11. 4	·0945					
10. 12	54. 15	11. 16	·0945					
10. 23	51. 55	11. 32	·0949					
10. 29	51. 45	12. 0	·0949					
10. 38	52. 50	12. 18	·0954					
11. 15	53. 15	12. 45	·0949					
11. 30	52. 20	13. 3	·0951					
11. 45	53. 0	13. 36	·0944					
12. 52	51. 0	14. 34	·0947					
13. 1	49. 15	15. 1	·0958					
13. 28	49. 10	15. 26	·0953					
13. 43	54. 30	16. 22	·0951					
13. 50	54. 20	16. 54	·0956					
14. 17	56. 0	17. 10	·0952					
14. 50	54. 0	17. 19	·0955					
15. 25	53. 40	18. 0	·0954					
16. 0	55. 15	18. 16	·0957					
16. 13	54. 50	18. 27	·0954					
16. 28	55. 0	18. 48	·0957					
16. 37	54. 45	19. 30	·0953					
16. 58	55. 30	20. 1	·0953					
17. 11	54. 10	20. 25	·0949					
17. 44	54. 55	20. 41	·0949					
18. 2	54. 50	21. 7	·0947					
18. 18	56. 50	22. 6	·0951					
18. 30	54. 50	22. 22	·0949					
18. 42	54. 45	22. 31	·0953					
18. 45	55. 5	23. 10	·0952					
19. 2	55. 10	23. 22	·0954					
19. 42	54. 35	23. 59	·0951					
20. 14	54. 30							

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 12								
h m	° ′ ″	h m		h m		h m	°	°
20. 57	20. 55. 50							
21. 7	55. 10							
22. 18	58. 55							
22. 30	57. 55							
22. 33	20. 59. 20							
23. 14	21. 1. 10							
23. 27	2. 15							
23. 30	1. 55							
23. 47	1. 20							
23. 59	1. 55							
Mar. 13		Mar. 13		Mar. 13		Mar. 13		
0. 0	21. 2. 15	0. 0	·0951	0. 0	·02290	0. 0	50 ·0	51 ·7
0. 16	2. 5	0. 50	·0952	0. 38	·02280	1. 0	50 ·6	51 ·8
0. 27	1. 25	0. 59	·0956	1. 20	·02293	2. 0	51 ·5	52 ·7
0. 44	1. 10	2. 23	·0956	2. 57	·02220	3. 0	52 ·3	53 ·6
0. 59	3. 20	2. 48	·0960	5. 42	·02016	9. 0	54 ·0	55 ·5
1. 22	3. 40	2. 54	·0962	6. 49	·01953	21. 0	47 ·0	49 ·6
1. 44	2. 20	3. 30	·0951	11. 6:	·01787			
2. 12	2. 0	3. 38	·0951	14. 15	·01900			
2. 55	3. 40	3. 53	·0946	18. 30	·02164			
3. 28	2. 0	4. 8	·0945	22. 7	·02336			
3. 38	2. 15	5. 7	·0955	23. 59	·02370			
3. 52	21. 1. 0	5. 41	·0957					
4. 37	20. 59. 0	6. 30	·0959					
7. 6	56. 55	7. 50	·0958					
7. 40	57. 0	8. 14	·0954					
7. 59	56. 35	8. 23	·0956					
8. 23	52. 0	8. 45	·0954					
9. 0	55. 0	9. 0	·0958					
9. 27	55. 15	9. 20	·0953					
9. 43	56. 30	9. 44	·0952					
10. 0	56. 10	10. 40	·0956					
11. 15	57. 25	10. 55	·0955					
14. 33	57. 55	13. 9	·0958					
	* * *	13. 31	·0956					
20. 3	54. 50	14. 37	·0957					
21. 32	56. 30	15. 3	·0960					
22. 40	58. 25	18. 22	·0962					
23. 6	20. 59. 45	18. 58	·0960					
23. 43	21. 0. 10	19. 54	·0960					
23. 59	0. 0	20. 38	·0955					
		21. 7	·0957					
		22. 4	·0958					
		22. 38	·0960					
		23. 44	·0967					
			(†)					
Mar. 14		Mar. 14		Mar. 14		Mar. 14		
0. 0	21. 0. 0		(†)	0. 0	·02370	1. 0	48 ·8	50 ·0
0. 37	1. 0	0. 13	·0960	2. 7	·02403	3. 0	50 ·2	50 ·8
0. 53	0. 20	0. 35	·0955	8. 12:	·02192	9. 0	48 ·9	51 ·0
1. 15	21. 0. 15	1. 7	·0957	13. 31	·02268	21. 0	44 ·8	46 ·3
2. 0	20. 59. 10	1. 25	·0956	18. 41	·02430			
2. 15	59. 30	2. 20	·0966	20. 0	·02478			
2. 44	58. 55	2. 41	·0963	20. 18	·02473			
2. 55	59. 5	2. 55	·0964	22. 14	·02544			
3. 16	58. 10	3. 22	·0958	23. 15	·02540			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 14		Mar. 14		Mar. 14		h. m.	°	°
h m	° ′ ″	h m		h m				
8. 29	20. 55. 40	3. 47	·0961	23. 59	·02558			
10. 23	56. 0	4. 22	·0964					
13. 9	54. 30	5. 4	·0962					
13. 17	55. 0	6. 18	·0967					
13. 55	51. 40	9. 48	·0968					
14. 57	56. 20	10. 13	·0969					
15. 15	57. 10	10. 37	·0968					
16. 31	57. 0	11. 10	·0969					
17. 8	56. 10	11. 45	·0968					
18. 38	56. 20	12. 0	·0970					
18. 59	56. 0	13. 7	·0966					
19. 5	56. 40	13. 31	·0972					
20. 3	54. 55	13. 46	·0973					
21. 12	56. 15	14. 16	·0966					
21. 26	57. 15	14. 35	·0964					
21. 28	58. 5	15. 10	·0965					
21. 40	57. 50	15. 35	·0967					
21. 45	58. 15	16. 10	·0969					
21. 54	58. 0	16. 53	·0971					
22. 27	20. 58. 55	17. 8	·0970					
22. 53	21. 2. 10	17. 23	·0971					
23. 7	2. 55	18. 29	·0972					
23. 18	1. 50	18. 53	·0968					
23. 46	4. 30	19. 4	·0970					
23. 59	4. 45	20. 38	·0963					
		20. 53	·0960					
		21. 1	·0961					
		21. 8	·0960					
		21. 20	·0963					
		21. 33	·0959					
		22. 23	·0963					
		22. 47	·0970					
		23. 7	·0967					
		23. 22	·0958					
		23. 28	·0961					
		23. 59	·0966					
Mar. 15		Mar. 15		Mar. 15		Mar. 15		
0. 0	21. 4. 45	0. 0	·0966	0. 0	·02558	1. 0	47 ·0	49 ·0
0. 13	4. 45	0. 28	·0971	0. 57	·02530	3. 0	48 ·0	50 ·2
0. 31	5. 35	0. 49	·0972	2. 28	·02578	9. 0	47 ·9	50 ·2
1. 6	5. 10	2. 37	·0966		·02523	22. 22	45 ·0	47 ·0
1. 32	3. 55	2. 52	·0964	5. 48:	·02340			
2. 5	5. 15	3. 26:	·0971	9. 14	·02304			
2. 19	3. 50	3. 53	·0969	9. 42	·02290			
2. 27	4. 20	4. 15	·0962	11. 20	·02284			
2. 40	3. 5	4. 40	·0958	22. 1	·02525			
3. 0	4. 5	5. 22	·0961	22. 9	·02514			
3. 20	3. 50	5. 44	·0964	23. 59	·02556			
3. 39	2. 35	6. 15:	·0969					
4. 6	3. 0	6. 51	·0966					
4. 25	2. 20	7. 15	·0966					
4. 36	21. 0. 55	7. 41:	·0973					
5. 45	20. 59. 0	8. 7	·0970					
7. 10	58. 10	8. 21	·0964					
7. 36	57. 15	8. 39	·0965					
7. 59	57. 50	9. 0	·0956					
8. 27	56. 55	9. 20	·0954					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Mar. 15 h m	° ′ ″
8. 43	20. 57. 0
8. 57	52. 30
9. 7	51. 40
9. 17	51. 30
9. 30	52. 50
9. 59	47. 15
10. 12	48. 10
10. 46	54. 10
10. 57	53. 40
11. 3	54. 10
11. 30	53. 0
11. 44	54. 30
12. 32	54. 5
	(†)
16. 55	56. 0
17. 25	56. 10
18. 6	55. 10
18. 30	56. 0
20. 18	53. 45
21. 41	55. 20
22. 0	57. 20
22. 9	20. 57. 10
23. 15	21. 0. 50
23. 59	2. 20
Mar. 16	
0. 0	21. 2. 20
0. 35	3. 15
1. 22	2. 20
1. 33	2. 50
2. 28	2. 10
3. 43	0. 5
4. 43	21. 1. 5
5. 34	20. 59. 45
6. 13	21. 0. 0
7. 10	20. 59. 0
7. 45	58. 0
7. 58	58. 25
9. 14	57. 50
	(†)
12. 44	52. 45
13. 0	50. 0
13. 16	49. 10
13. 30	50. 40
14. 10	53. 5
14. 28	52. 5
14. 56	52. 55
15. 15	49. 30
15. 33	49. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 15 h m	
9. 40	·0960
10. 5	·0956
10. 33:	·0949
11. 12	·0962
11. 22	·0960
11. 29	·0962
11. 40	·0957
11. 53	·0960
12. 12	·0962
12. 35	·0959
13. 40	·0963
14. 3	·0958
14. 17	·0961
14. 54	·0959
15. 33	·0961
15. 40	·0964
15. 49	·0962
16. 1	·0964
17. 31	·0965
17. 44	·0964
17. 52	·0965
18. 12	·0963
18. 39	·0965
19. 7	·0965
21. 3	·0959
21. 22	·0956
22. 6	·0955
22. 7	·0959
22. 23	·0960
22. 44	·0958
23. 8	·0957
23. 31	·0959
23. 59	·0951
Mar. 16	
0. 0	·0951
0. 12	·0953
0. 22	·0957
1. 1	·0962
1. 49	·0963
2. 20	·0970
2. 37	·0970
3. 4	·0974
3. 52	·0974
4. 20	·0975
5. 2	·0973
5. 19	·0967
5. 35	·0964
6. 25	·0966
7. 24	·0965
7. 45	·0961
8. 5	·0965
8. 13	·0964
9. 32	·0960
9. 50	·0962
10. 9	·0957
10. 24	·0958
10. 43	·0955

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Mar. 16 h m	
0. 0	·02556
0. 35	·02565
0. 40	·02547
3. 51	·02600
8. 52	·02514
13. 30	·02488
20. 40	·02543
23. 59	·02544

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 16		
9. 0	47 ·0	48 ·8
21. 0	46 ·0	48 ·6

Greenwich Mean Solar Time.	Western Declination.
Mar. 16 h m	° ′ ″
15. 59	20. 51. 10
16. 16	50. 30
16. 43	52. 0
17. 28	53. 5
17. 48	54. 45
18. 17	20. 58. 0
18. 47	21. 0. 10
19. 19	0. 50
19. 48	2. 40
20. 14	2. 45
22. 44	9. 10
23. 30	9. 30
23. 34	9. 55
23. 59	9. 25
Mar. 17	
0. 0	21. 9. 0
0. 50	6. 30
0. 59	5. 45
1. 10	6. 40
1. 18	6. 25
2. 14	7. 0
2. 21	7. 50
2. 27	7. 25
2. 45	7. 20
3. 0	7. 0
3. 30	3. 30
3. 46	3. 10
4. 22	21. 0. 40
6. 0	20. 58. 30
8. 14	58. 5
8. 29	58. 5
8. 36	57. 45
8. 57	57. 45
9. 29	58. 10
10. 52	57. 50
11. 0	58. 20
11. 20	57. 50
11. 30	58. 15
11. 41	57. 50
14. 34	58. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 16 h m	
10. 54	·0958
11. 13	·0959
11. 32	·0956
12. 7	·0960
12. 15	·0959
12. 36	·0955
13. 25	·0958
14. 1	·0963
14. 28	·0963
14. 38	·0968
14. 50	·0963
15. 3	·0966
15. 41	·0965
16. 40	·0977
17. 7	·0976
18. 0	·0983
18. 12	·0984
18. 36	·0988
19. 3	·0988
19. 36	·0984
20. 23	·0985
20. 51	·0978
21. 17	·0981
21. 32	·0980
22. 4	·0972
22. 15	·0973
22. 25	·0971
22. 35	·0974
23. 25	·0961
23. 50	·0959
23. 59	·0958
Mar. 17	
0. 0	·0958
0. 37	·0956
0. 41	·0961
0. 58	·0962
1. 6	·0965
1. 48	·0965
2. 19	·0958
2. 26	·0958
2. 53	·0953
3. 15	·0961
3. 17	·0962
3. 23	·0963
4. 14:	·0942
4. 50:	·0958
6. 16	·0967
7. 44	·0968
8. 0	·0967
8. 6	·0968
8. 51	·0969
9. 10	·0968
9. 24	·0969
9. 53	·0969
10. 22	·0970
12. 7	·0970
12. 17	·0971

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Mar. 17 h m	
0. 0	·02544
2. 14	·02282
3. 13	·02273
6. 23:	·02124
9. 47	·02173
15. 35	·02428
15. 42	·02417
16. 37	·02448
16. 43	·02426
18. 30	·02468
22. 15	·02404 / ·01535
23. 59	·01432

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 17		
1. 0	49 ·0	50 ·2
3. 0	50 ·0	50 ·5
9. 0	47 ·5	48 ·5
21. 0	44 ·0	45 ·3

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 17		Mar. 17						
h m	° ′ ″	h m		h m		h m	°	°
16. 30	20. 58. 30	12. 31	·0970					
17. 32	57. 15	12. 53	·0972					
17. 44	57. 50	14. 32	·0972					
17. 53	56. 50	15. 6	·0974					
18. 7	58. 5	15. 42	·0973					
18. 14	20. 58. 0	16. 52	·0974					
18. 30	21. 0. 30	17. 22	·0988					
18. 47	20. 58. 30	17. 38	·0982					
19. 0	58. 20	17. 51	·0985					
19. 17	55. 5	18. 8	·0981					
19. 28	56. 15	18. 15	·0982					
19. 33	55. 55	18. 25	·0987					
19. 38	54. 45	18. 47	·0981					
19. 44	54. 40	19. 8	·0977					
19. 49	56. 20	19. 29	·0982					
20. 5	54. 35	19. 45	·0975					
20. 16	54. 5	19. 50	·0976					
20. 28	54. 25	20. 21	·0967					
20. 33	55. 0	20. 48	·0972					
20. 44	53. 50	21. 3	·0966					
20. 53	55. 30	21. 23	·0967					
21. 8	54. 55	21. 37	·0968					
21. 13	56. 0	21. 53	·0964					
21. 29	55. 40	22. 1	·0966					
21. 45	57. 45	22. 8	·0962					
21. 52	57. 20	22. 30	·0965					
22. 6	58. 25	22. 53	·0954					
22. 17	20. 58. 25	23. 3	·0958					
22. 37	21. 0. 40	23. 12	·0959					
22. 52	0. 40	23. 24	·0967					
23. 0	0. 10	23. 35	·0962					
23. 26	1. 55	23. 49	·0962					
23. 30	3. 0	23. 59	·0958					
23. 59	4. 10							
Mar. 18		Mar. 18		Mar. 18		Mar. 18		
0. 0	21. 4. 10	0. 0	·0958	0. 0	·01432	1. 0	47 ·8	49 ·7
0. 13	4. 0	0. 15	·0959	2. 51	·01294	3. 0	49 ·0	50 ·7
0. 20	6. 10	0. 30	·0961		·01375	9. 0	49 ·1	51 ·0
0. 29	7. 45	0. 44	·0957	4. 54	·01212	21. 0	43 ·3	46 ·0
0. 58	7. 45	0. 51	·0958	6. 9	·01220	22. 0	44 ·0	46 ·4
1. 3	7. 10	1. 11	·0947	7. 1	·01265	23. 0	44 ·6	46 ·7
1. 29	7. 5	1. 56	·0968	11. 48	·01313			
1. 50	4. 10	2. 2	·0964	19. 37	·01625			
3. 45	1. 0	2. 22	·0970	21. 59	·01732			
4. 3	21. 0. 0	3. 51	·0969	23. 17	·01772			
4. 43	20. 59. 0	4. 10	·0965	23. 59	·01714			
5. 2	58. 10	4. 22	·0968					
5. 20	57. 45	4. 39	·0968					
5. 34	57. 45	5. 0	·0960					
6. 6	56. 40	5. 25	·0959					
6. 36	52. 10	5. 42	·0955					
6. 57	53. 30	6. 7	·0948					
7. 2	53. 15	6. 23	·0946					
7. 24	57. 0	6. 42	·0953					
7. 48	56. 15	6. 56	·0951					
8. 37	57. 50	7. 10	·0956					
9. 12	57. 45	7. 40	·0953					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 18		Mar. 18						
h m	° ′ ″	h m		h m		h m	°	°
10. 0	20. 58. 15	8. 0	·0956					
11. 17	57. 50	9. 25	·0957					
11. 28	58. 10	10. 5	·0960					
11. 44	57. 50	10. 23	·0963					
12. 8	55. 0	10. 57	·0961					
12. 21	56. 15	11. 17	·0961					
12. 59	57. 30	11. 43	·0968					
13. 6	57. 20	12. 13	·0966					
13. 33	58. 10	12. 45	·0963					
13. 58	57. 50	13. 22	·0965					
14. 15	58. 35	13. 35	·0964					
14. 59	58. 0	14. 8	·0966					
15. 29	58. 30	15. 3	·0968					
17. 45	55. 15	17. 18	·0970					
18. 16	56. 0	17. 26	·0971					
18. 31	55. 45	18. 26	·0967					
18. 47	54. 20	18. 34	·0968					
19. 3	55. 0	18. 45	·0967					
19. 21	54. 50	18. 59	·0969					
19. 33	53. 15	20. 34	·0963					
19. 44	53. 35	20. 50	·0961					
19. 48	54. 35	21. 3	·0967					
20. 16	53. 30	21. 56	·0958					
20. 30	53. 30	22. 16	·0948					
20. 47	55. 10	22. 27	·0946					
20. 58	53. 45	22. 45	·0939					
21. 36	20. 56. 20	22. 53	·0941					
23. 0	21. 5. 50	23. 6	·0938					
23. 22	5. 5 (†)	23. 23	·0939 (†)					
Mar. 19		Mar. 19		Mar. 19		Mar. 19		
1. 0	21. 11. 8*	1. 0	·0969*	0. 0	·01714	0. 0	45 ·5	47 ·2
3. 0	21. 4. 25*	3. 0	·0956*	1. 19	·01697	1. 0	46 ·5	48 ·2
9. 0	20. 54. 30*	9. 0	·0932*	1. 54	·01725	2. 0	47 ·0	49 ·3
21. 0	54. 57*	21. 0	·0954*	3. 39	·01564	3. 0	47 ·8	50 ·7
				5. 46	·01283	9. 0	51 ·5	53 ·0
				6. 53	·01348 (†)	12. 0	47 ·0	48 ·0
				9. 0	·01537*	18. 0	40 ·0	41 ·8
				21. 0	·02462*	21. 0	42 ·0	44 ·0
						22. 0	42 ·5	44 ·0
						23. 0	42 ·7	44 ·2
Mar. 20		Mar. 20		Mar. 20		Mar. 20		
1. 0	21. 4. 12*	1. 0	·0952*	1. 0	·01690*	0. 0	43 ·2	44 ·3
3. 0	21. 2. 32*	3. 0	·0951*	3. 0	·01624*	1. 0	43 ·8	44 ·3
9. 35	20. 59. 5*	9. 35	·0964*	9. 35	·01418*	2. 0	44 ·3	44 ·7
21. 0	53. 21*	21. 0	·0961*	21. 0	·01700*	3. 0	44 ·6	45 ·2
						9. 35	44 ·0	44 ·0
						21. 0	39 ·0	39 ·7
Mar. 21		Mar. 21		Mar. 21		Mar. 21		
1. 0	21. 5. 38*	1. 0	·0961*	1. 0	·01624*	1. 0	41 ·3	42 ·6
3. 0	21. 4. 24*	3. 0	·0970*	3. 0	·01587*	3. 0	42 ·6	43 ·0
9. 0	20. 57. 53*	9. 0	·0973*	9. 0	·01429*	9. 0	41 ·5	42 ·2
21. 0	55. 19*	21. 0	·0982*	21. 0	·01750*	21. 0	38 2	39 ·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

March 19. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

March 20 to 26. There were no Photographic Registers for the three Magnetometers, as the gas-pipes were undergoing repair.

Greenwich Mean Solar Time.	Western Declination.
Mar. 22 h m	° ′ ″
1. 0	21. 3. 45*
3. 0	21. 1. 13*
9. 0	20. 57. 29*
23. 0	21. 0. 25*
Mar. 23	
6. 50	20. 55. 44*
21. 0	53. 7*
Mar. 24	
1. 0	21. 3. 30*
3. 0	21. 1. 42*
9. 0	20. 54. 43*
21. 0	51. 17*
Mar. 25	
1. 0	21. 1. 11*
3. 0	21. 1. 1*
9. 0	20. 56. 31*
21. 0	51. 12*
Mar. 26	
1. 0	21. 3. 5*
3. 0	21. 1. 22*
9. 10	20. 54. 48*
21. 0	53. 30*
Mar. 27	
	(†)
0. 38	21. 4. 45
2. 29	2. 0
3. 23	21. 0. 10
4. 10	20. 59. 50
5. 14	58. 0
6. 13	57. 0
	(†)
9. 0	57. 38*
16. 45	55. 10
17. 35	54. 0
18. 45	20. 54. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 22 h m	
1. 0	·0975
3. 0	·0989
9. 0	·0975*
23. 0	·0950
Mar. 23	
6. 50	·0969*
21. 0	·1000
Mar. 24	
1. 0	·0993*
3. 0	·0989*
9. 0	·0987*
21. 0	·0977*
Mar. 25	
1. 0	·0979*
3. 0	·0974*
9. 0	·0995*
21. 0	·0981
Mar. 26	
	(†)
1. 0	·0971*
3. 0	·0976*
8. 4	·1006
10. 22	·1006
10. 52	·0999
12. 37	·1004
12. 56	·1006
13. 29	·1003
13. 58	·1002
14. 31	·1004
16. 38	·1009
17. 8	·1008
17. 34	·1009
18. 28	·1008
19. 53	·1002
	(†)
20. 52	·0994
21. 17	·0991
	(†)
Mar. 27	
	(†)
1. 0	·0996*
1. 16	·0994
2. 7	·0990
3. 9	·0993
4. 6	·0993
4. 53:	·0992
5. 39	·0998
6. 3	·0993
6. 34	·0993
6. 52	·0995
7. 9	·0995

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Mar. 22 h m	
1. 0	·01513*
3. 0	·01307*
9. 0	·01228*
23. 0	·01671*
Mar. 23	
6. 50	·01679*
21. 0	·01885*
Mar. 24	
1. 0	·02209*
3. 0	·02177*
9. 0	·02114*
21. 0	·02557*
Mar. 25	
1. 0	·02589*
3. 0	·02511*
9. 0	·02051*
21. 0	·02605*
Mar. 26	
	(†)
1. 0	·02739*
3. 0	·02707*
7. 50	·02566
10. 28	·02546
13. 23	·02573
19. 8	·02702
	(†)
21. 0	·02731*
23. 19	·02728
23. 59	·02736
Mar. 27	
0. 0	·02736
2. 11	·02577
2. 27	·02595
2. 47	·02572
3. 0	{·02584
	{·02280
5. 34	·02363
7. 46	·02373
9. 40	·02365
11. 22	·02380
12. 15	·02431
12. 51	·02417

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 22 h m	°	°
1. 0	43·0	43·6
3. 0	45·6	45·5
9. 0	46·0	46·0
23. 0	40·1	41·0
Mar. 23		
6. 50	43·8	44·0
21. 0	48·0	48·6
Mar. 24		
1. 0	51·2	51·8
3. 0	54·2	54·5
9. 0	57·2	57·5
21. 0	52·8	53·7
Mar. 25		
1. 0	54·7	54·5
3. 0	56·0	56·4
9. 0	56·0	55·5
21. 0	50·2	51·5
22. 0	50·2	50·7
23. 0	50·8	51·0
Mar. 26		
0. 0	51·2	51·7
1. 0	51·7	51·8
2. 0	52·3	52·6
3. 0	53·2	53·6
6. 0	53·3	53·0
9. 10	53·0	52·7
12. 0	52·0	52·4
18. 0	48·6	49·3
21. 0	50·0	50·7
22. 0	50·2	50·8
23. 0	50·6	51·6
Mar. 27		
0. 0	51·0	52·2
1. 0	52·2	53·7
2. 0	53·9	54·8
3. 0	55·0	56·0
9. 0	57·3	58·2
21. 0	51·7	53·0

Greenwich Mean Solar Time.	Western Declination.
Mar. 27 h m	° ′ ″
20. 2	20. 59. 0
21. 44	21. 5. 30
	(†)
Mar. 28	
1. 0	20. 59. 51*

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 27 h m	
8. 15	·0993
8. 25	·0994
8. 39	·0992
8. 58	·0993
9. 4	·0995
9. 45	·0992
10. 7	·0997
10. 21	·0995
10. 41	·0998
	***
11. 44	·0999
11. 56	·1001
12. 8	·1007
12. 15	·1007
12. 37:	·1015
13. 6	·0997
13. 15	·0996
13. 38:	·1009
14. 31:	·0994
16. 8	·0998
17. 0	·1002
18. 22	·1002
19. 11	·1000
19. 43	·0995
20. 2	·0993
21. 50	·0979
22. 8	·0981
22. 44	·0978
22. 54	·0981
23. 8	·0983
23. 19	·0987
23. 55	·0991
23. 59	·0991
Mar. 28	
0. 0	·0991
1. 8	·1028
1. 37	·1023
2. 4	·1024
2. 20	·1023
2. 37	·1026
4. 36	·1026
4. 53	·1030
5. 24	·1028
6. 2	·1032
8. 13	·1033
8. 24	·1034
9. 12	·1033
9. 42	·1034
11. 10	·1034
11. 33	·1036
11. 44	·1035
11. 55	·1035
18. 15	·1037
20. 0	·1028
21. 32	·1015
21. 49	·1014
22. 20	·1007

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Mar. 27 h m	
13. 23	·02460
20. 30	·02846
22. 5	·02870
23. 59	·02885
Mar. 28	
0. 0	·02885
1. 25	·02917
6. 43	·02835
12. 52	·02880
18. 45	·03066
20. 9	·03037
20. 40	·02998
21. 47	{·02980
	{·02945
23. 59	·02930

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 27 h m	°	°
Mar. 28		
1. 0	51·8	53·7
3. 0	52·4	53·9
9. 0	51·5	53·0
21. 0	48·5	50·2

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

March 28. After 1h the Declination Magnet was under adjustment.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar.28 h m		h m		h m	°	°
		23. 9	·1014 ***					
		23. 36	·1019					
		23. 43	·1018 ***					
		23. 59	·1023					
Mar.29		Mar.29		Mar.29		Mar.29		
	(†)	0. 0	·1023	0. 0	·02930	1. 0	49 ·0	50 ·2
1. 0	20. 59. 15*	0. 17	·1025	3. 2	·02942	3. 0	49 ·8	51 ·2
2. 45	57. 50	0. 25	·1019	8. 27:	·02744	9. 0	49 ·5	51 ·0
4. 16	54. 35	0. 56	·1019	13. 45	·02856	20. 52	48 ·8	50 ·3
5. 51	53. 0	1. 51:	·1028	19. 55	·02930			
7. 36	52. 30	2. 15	·1027	23. 59	·02778			
11. 26	53. 0	3. 22	·1031					
12. 15	52. 20	3. 49	·1031					
12. 26	52. 10	4. 50:	·1027					
15. 0	51. 50	5. 33	·1030					
15. 22	52. 55	7. 34	·1034					
16. 22	51. 45	8. 45	·1034					
17. 5	52. 0	9. 31	·1033					
17. 30	51. 10	11. 21	·1036					
18. 22	50. 25	12. 16	·1036					
19. 27	47. 10	12. 57	·1037					
20. 0	46. 15	14. 0	·1037					
20. 41	46. 50	15. 25	·1037					
21. 18	48. 10	16. 11	·1039					
	(†)	16. 56	·1038					
		17. 29	·1039					
		18. 50	·1037					
		19. 21	·1035					
		20. 22	·1027					
		20. 58	·1020					
		21. 43	·1013					
		23. 0	·1013					
		23. 59	·1019					
Mar.30		Mar.30		Mar.30		Mar.30		
8. 55	20. 54. 14*	0. 0	·1019	0. 0	·02778	8. 55	51 ·2	52 ·1
21. 0	49. 23*	0. 26	·1023	2. 42	·02796	21. 0	48 ·3	49 ·2
		2. 10	·1029	5. 13	·02740			
		2. 29	·1027	6. 9	·02720			
		2. 41	·1032		(†)			
		2. 48:	·1033	8. 55	·02684*			
		3. 7	·1032	21. 0	·02937*			
		3. 59	·1037	22. 24	·02768			
		4. 54	·1037	23. 59	·02747			
		5. 16	·1034					
			(†)					
		8. 55	·1036*					
		21. 0	·1020*					
Mar.31		Mar.31		Mar.31		Mar.31		
	(†)		(†)	0. 0	·02747	1. 0	51 ·0	52 ·0
0. 38	20. 56. 55	1. 0	·1024*	0. 47	·02802	3. 0	52 ·7	54 ·2
1. 14	57. 0	1. 35	·1017		·02593	9. 0	54 ·0	55 ·0
1. 29	56. 20	2. 20	·1022	4. 53	·02257	21. 0	50 ·0	50 ·7
2. 0	56. 10	4. 5	·1028	9. 0	·02298			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.31		Mar.31		Mar.31		Mar.31		
h m	° ′ ″	h m		h m		h m	°	°
3. 42	20. 52. 0	5. 8	·1028	16. 8	·02314			
6. 10	48. 10	6. 5	·1026		·02450			
6. 32	48. 5	7. 8	·1028	18. 2	·02503			
6. 58	47. 35	7. 46	·1026	22. 13	·02704			
8. 48	48. 55	8. 43	·1027	23. 59	·02680			
	(†)	9. 18	·1030					
9. 0	51. 0*	11. 38	·1032					
19. 15	42. 35	14. 35	·1032					
19. 47	43. 15	16. 23	·1033					
20. 45	46. 0	18. 19	·1037					
22. 30	54 30	20. 0	·1029					
	(†)	21. 30	·1009					
		21. 34	·1009					
		21. 59	·1005					
		22. 14	·1005					
		22. 49	·1004					
		23. 22	·1009					
		23. 27	·1008					
		23. 36	·1010					
		23. 46	·1010					
			(†)					
Apr. 1		Apr. 1		Apr. 1		Apr. 1		
1. 0	21. 2. 3*		(†)	0. 0	·02680	1. 0	51 ·3	51 ·7
3. 0	20. 58. 59*	1. 0	·1021*	2. 31	·02663	3. 0	52 ·5	53 ·0
9. 20	47. 56*	3. 0	·1029*	8. 3	·02452	9. 20	53 ·8	53 ·9
21. 0	48. 38*	6. 21	·1031	9. 5	·02450	21. 0	53 ·2	53 ·8
		6. 37	·1034	10. 3	·02394	22. 0	53 ·7	54 ·2
		7. 0	·1032	10. 37	·02426	23. 0	53 ·8	54 ·2
		7. 14	·1036	11. 10	·02410			
		7. 20	·1036	12. 28	·02403			
		7. 37	·1038	16. 15	·02460			
		7. 53	·1029	20. 56	·02521			
		8. 35	·1022	23. 30	·02500			
		8. 45	·1024	23. 37	·02515			
		9. 19	·1024	23. 59	·02521			
		9. 30	·1026					
		9. 49	·1007					
		10. 25	·1028					
		11. 9	·1025					
		11. 32	·1027					
		11. 40	·1026					
		12. 6:	·1017					
		12. 32	·1025					
		13. 22	·1022					
		13. 37	·1023					
		14. 15	·1022					
		14. 40	·1025					
		15. 4:	·1031					
		15. 52	·1027					
		16. 15	·1029					
		17. 42	·1026					
		18. 5	·1022					
		19. 0	·1016					
		19. 6	·1017					
		19. 41	·1019					
		20. 10	·1016					
		20. 44	·1008					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

March 30 and April 1. The Photographic Traces for the Declination Magnet were too faint for use.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Apr. 1	
20. 49	
20. 56	
21. 16	
21. 44	
Apr. 2	
	(†)
0. 32	21. 6. 0
0. 40	7. 40
0. 53	5. 55
0. 54	5. 45
1. 2	3. 30
1. 9	5. 30
1. 21	5. 0
1. 38	7. 55
1. 46	7. 45
1. 55	12. 0
2. 5	12. 0
2. 32	8. 0
2. 46	1. 35
2. 57	1. 30
3. 2	2. 30
3. 14	1. 45
3. 22	3. 20
3. 32	2. 35
3. 35	3. 0
3. 51	0. 0
4. 0	0. 5
4. 12	1. 45
4. 24	21. 1. 15
4. 36	20. 58. 0
4. 42	59. 45
4. 45	57. 0
4. 50	56. 40
5. 2	54. 35
5. 4	54. 55
5. 13	53. 0
5. 19	57. 0
5. 28	45. 45
5. 31	46. 10
5. 33	45. 25
5. 45	49. 30
5. 48	45. 20
5. 51	46. 40
5. 56	46. 0
6. 11	36. 0
6. 28	45. 55
6. 38	48. 20
6. 46	48. 40
6. 49	45. 10
6. 56	46. 50
7. 1	45. 50
7. 9	50. 0
7. 26	45. 0
7. 48	49. 50
8. 12	35. 30
8. 32	43. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Apr. 1	
20. 49	·1009
20. 56	·1007
21. 16	·1009
21. 44	·1007
	(†)
Apr. 2	
	(†)
0. 46	·0994
1. 13	·1008
1. 27	·0994
	(†)
1. 52	·1008
2. 9	·1011
2. 26	·1025
2. 41	·1013
2. 52	·1007
3. 5	·0995
3. 16:	·1009
3. 35	·1005
4. 8	·1025
4. 22	·1017
4. 40	·1024
5. 7	·1012
5. 16	·1017
5. 24	·1011
5. 32	·1010
	(†)
7. 10	·0995
7. 13	·0998
7. 22	·0995
7. 26	·0998
7. 38	·0982
7. 54	·0999
8. 1	·0998
8. 25:	·0987
8. 41	·0994
8. 52	·0993
8. 54	·0996
9. 11	·0984
9. 30	·1000
9. 37	·0991
9. 45	·0998
10. 1	·0982
10. 25	·1009
10. 40	·0994
10. 48	·1003
10. 56	·1006
11. 10	·1000
11. 21	·1007
11. 27	·1006
11. 40	·1000
11. 48	·1002
12. 10:	·1028
12. 21	·1028
12. 27	·1036
12. 54	·1012
13. 0	·1012

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 2	
0. 0	·02521
4. 59	·02543
5. 6	·02570
5. 16	·02542
5. 33	·02552
5. 36	·02521
5. 58	·02516
6. 5	·02525
6. 27	·02483
7. 11	·02462
8. 14	·02458
8. 29	·02420
9. 20	·02403
9. 47	·02365
11. 6	·02392
11. 46	·02370
11. 58	·02338
12. 36	·02310
14. 26	·02394
19. 2	·02398
23. 59	·02377

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 2		
0. 0	54·2	54·7
1. 0	55·0	55·0
2. 0	55·2	55·0
3. 0	55·6	55·8
6. 0	55·8	56·0
9. 0	55·8	56·0
12. 0	55·0	55·8
18. 0	55·0	55·1
21. 0	55·0	55·3
22. 0	55·2	55·5
23. 0	55·6	55·6

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Apr. 2	
8. 50	20. 38. 0
8. 54	39. 0
9. 1	36. 30
9. 10	36. 30
9. 18	41. 40
9. 33	37. 55
9. 39	37. 55
9. 51	33. 0
10. 3	31. 40
10. 22	45. 15
10. 32	44. 40
10. 39	45. 35
10. 47	47. 10
10. 50	47. 5
11. 2	44. 0
11. 13	46. 10
11. 28	44. 20
11. 45	51. 50
11. 48	48. 25
12. 2	50. 20
12. 10	49. 15
12. 23	52. 5
12. 46	49. 10
12. 48	49. 40
12. 58	48. 0
13. 17	48. 55
13. 55	51. 10
14. 8	50. 50
14. 25	51. 55
14. 38	51. 5
15. 3	51. 10
15. 18	52. 30
15. 27	52. 15
15. 33	53. 0
16. 13	52. 10
16. 44	52. 35
16. 51	54. 25
17. 7	54. 10
17. 25	53. 15
17. 30	53. 40
17. 34	53. 35
17. 42	52. 15
17. 50	52. 50
18. 0	50. 50
18. 49	49. 30
19. 19	47. 50
19. 33	48. 10
19. 38	47. 0
19. 50	47. 50
19. 58	47. 40
20. 0	46. 50
20. 8	47. 20
20. 41	46. 50
21. 36	52. 50
21. 55	52. 0
22. 4	53. 30
22. 19	54. 0
22. 40	56. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Apr. 2	
13. 8	·1006
13. 19	·1006
13. 34	·1001
13. 55	·0997
14. 5	·0997
14. 38	·1003
14. 55	·1002
15. 8	·1003
15. 55	·1002
16. 13	·1006
17. 8	·0998
17. 26	·1001
17. 39	·1007
17. 46	·1006
17. 54	·1009
18. 7	·1007
18. 39:	·1010
18. 51	·1010
19. 41	·1000
19. 55	·0994
20. 10	·0995
20. 28	·0992
20. 42	·0995
21. 28	·0992
21. 48	·0987
21. 55	·0991
22. 1	·0990
22. 6	·0992
22. 16	·0988
22. 32	·0995
22. 46	·0989
22. 59	·0989
23. 59	·0981

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Apr. 2	
h m	° ′ ″
23. 2	20. 56. 45
23. 12	58. 0
23. 27	59. 35
23. 40	20. 58. 10
23. 54	21. 0. 10
23. 59	0. 10
Apr. 3	
0. 0	21. 0. 10
0. 31	0. 15
1. 19	2. 45
2. 8	21. 2. 0
2. 58	20. 56. 40
3. 43	57. 10
3. 56	55. 25
4. 12	55. 10
4. 24	53. 10
5. 9	52. 15
5. 27	47. 55
5. 56	51. 15
6. 29	51. 0
6. 48	48. 30
6. 55	51. 0
7. 5	52. 10
7. 37	44. 10
7. 52	45. 50
7. 54	45. 25
8. 15	49. 10
8. 29	50. 35
8. 41	50. 10
8. 52	51. 15
9. 18	50. 40
9. 42	48. 50
10. 22	51. 45
10. 42	48. 50
10. 57	51. 10
11. 26	52. 40
11. 47	48. 45
12. 53	47. 15
13. 15	53. 0
13. 30	50. 45
13. 55	51. 30
14. 49	49. 10
16. 33	53. 0
17. 6	50. 15
18. 0	50. 15
18. 30	50. 15
18. 41	49. 20
19. 11	50. 10
20. 12	48. 25
21. 14	49. 45
21. 37	51. 50 (†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 3	
h m	
0. 0	·0981
1. 1	·0991
1. 34	·1007
2. 19	·1006
2. 57	·0999
3. 24	·1013
3. 34	·1009
3. 49	·1001
3. 57	·1002
4. 4	·1004
4. 24	·0995
4. 33	·0997
4. 36	·0996
4. 57	·1004
5. 15	·0998
5. 20	·0998
5. 35	·0989
5. 46	·0992
6. 17	·0993
6. 45	·0988
6. 59	·0983
7. 12	·1004
7. 44	·0966
7. 56	·0976
8. 1	·0975
8. 9	·0972
8. 21	·0972
8. 31	·0975
8. 51	·0968
9. 7	·0967
9. 39	·0971
9. 50	·0968
10. 0	·0969
10. 11	·0966
10. 26	·0978
10. 52	·0970
11. 19	·0989
11. 31	·0989
12. 3	·0975
12. 39	·0979
13. 13	·0969
13. 32	·0974
14. 27	·0980
15. 29	·0977
15. 33	·0970
16. 29	·0975
17. 0	·0982
17. 15	·0979
18. 13	·0978
18. 23	·0979

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 3	
h m	
0. 0	·02377
1. 52	·02380
2. 33	·02363
3. 5	·02435
	·02463
4. 23	·02434
4. 41	·02461
5. 10	·02432
5. 25	·02454
5. 46	·02440
6. 39	·02418
6. 51	·02456
7. 17	·02418
7. 27	·02462
10. 49	·02544
11. 26	·02530
13. 4	·02635
13. 23	·02641
16. 42	·02863
16. 57	·02872
18. 49	·03020
19. 47	·03040
	·03000
20. 57	·03017
	·02912
21. 35	·02855
	·02706
23. 59	·02742

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 3		
h m	°	°
0. 0	55·7	55·8
1. 0	56·0	56·3
3. 0	57·3	58·2
9. 0	58·7	58·6
21. 0	51·5	52·1

Greenwich Mean Solar Time.	Western Declination.
Apr. 4	
h m	° ′ ″
0. 15	20. 58. 55
1. 22	59. 5
1. 57	57. 30
2. 44	57. 15
3. 3	55. 55
3. 23	56. 15
3. 40	54. 50
4. 45	52. 50
5. 10	53. 10
5. 24	51. 50
6. 30	50. 50
6. 52	51. 15
7. 12	50. 0
7. 16	50. 15
7. 28	49. 0
8. 19	49. 20
8. 35	50. 30
8. 45	49. 50
9. 10	54. 0
9. 29	51. 20
9. 48	51. 35
10. 31	50. 0
11. 33	49. 0
11. 43	49. 35
11. 54	48. 25
12. 20	51. 10
13. 0	46. 10
13. 18	46. 0
13. 52	45. 20
14. 17	47. 40
14. 35	47. 10
15. 5	47. 45
15. 20	48. 55
16. 18	48. 0
16. 48	49. 50
17. 19	54. 25
17. 54	50. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 3	
h m	
18. 38	·0976
19. 11	·0983
20. 19	·0971
20. 44	·0972
21. 14	·0970
21. 29	·0963
21. 47	·0957
21. 51	·0958
21. 58	·0956
22. 6	·0958
22. 16	·0956
22. 33	·0959
22. 49	·0955
22. 57	·0957
23. 7	·0950
23. 21	·0952
23. 32	·0951
23. 59	·0956
Apr. 4	
0. 0	·0956
1. 3	·0962
2. 11	·0969
2. 24	·0967
2. 53	·0973
3. 22	·0976
3. 39	·0973
4. 0	·0977
4. 22	·0973
5. 3	·0977
	(†)
9. 0	·0986*
10. 48	·0979
11. 34	·0980
11. 54	·0986
12. 9	·0981
12. 34	·0979
13. 35	·0992
14. 0	·0985
14. 25	·0982
14. 55	·0985
15. 15	·0980
15. 37	·0980
16. 11	·0984
17. 3	·0974
17. 21	·0976
17. 31	·0987
17. 47	·0987
18. 8	·0982
18. 53	·0985
19. 15	·0982
19. 38	·0974
20. 10	·0971
20. 37	·0972
21. 1	·0966
21. 19	·0957
21. 25	·0955
22. 20	·0955

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 4	
h m	
0. 0	·02742
3. 11	·02716
9. 31	·02550
14. 45	·02590
17. 13	·02660
17. 45	·02673
20. 12	·02773
20. 56	·02766
22. 43	·02824
23. 59	·02833

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 4		
h m	°	°
1. 0	52·2	53·3
3. 0	53·1	54·0
9. 0	53·0	54·0
21. 0	50·3	50·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Apr. 4	
h m	° ′ ″
19. 19	20. 49. 25
	***
20. 30	47. 50
22. 40	56. 45
23. 37	57. 20
23. 47	57. 10
23. 59	57. 30
Apr. 5	
0. 0	20. 57. 45
0. 19	59. 50
0. 29	59. 0
0. 36	59. 50
1. 3	20. 59. 15
1. 35	21. 0. 15
3. 26	20. 57. 0
4. 59	52. 30
5. 30	52. 10
6. 15	50. 30
6. 44	50. 20
7. 0	51. 0
7. 22	46. 20
7. 34	48. 40
7. 45	48. 5
8. 12	49. 50
8. 18	49. 20
8. 30	50. 45
9. 0	49. 0
9. 33	48. 45
9. 45	50. 0
9. 59	50. 10
10. 15	48. 55
10. 30	49. 55
11. 3	47. 25
12. 30	48. 50
12. 52	49. 0
13. 8	50. 40
13. 24	50. 25
13. 33	51. 10
13. 45	55. 0
14. 8	52. 10
14. 24	51. 15
14. 33	51. 25
15. 34	49. 40
15. 57	50. 10
17. 3	49. 20
18. 12	49. 20
18. 26	50. 10
19. 3	47. 30
19. 37	46. 10
19. 44	46. 55
20. 27	45. 50
21. 13	45. 50
21. 42	48. 0
21. 57	48. 5
22. 34	50. 30
23. 59	56. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 4	
h m	
23. 30	·0972
23. 38	·0954
23. 52	·0968
23. 59	·0967
Apr. 5	
0. 0	·0967
0. 19	·0965
0. 35	·0967
0. 51	·0965
1. 9	·0968
2. 10	·0968
2. 49	·0971
3. 26	·0971
4. 3	·0969
4. 32	·0974
4. 46	·0973
5. 6	·0966
5. 31	·0970
5. 45	·0970
5. 58	·0974
6. 28	·0976
6. 35	·0974
6. 52	·0974
7. 7	·0969
7. 10	·0970
7. 22	·0967
7. 25	·0968
7. 41	·0964
8. 3	·0971
8. 22	·0971
9. 16	·0972
9. 37	·0965
10. 5	·0971
10. 36	·0970
11. 0	·0977
11. 24	·0967
11. 40	·0972
11. 53	·0970
13. 9	·0968
13. 36	·0971
15. 10	·0972
15. 22	·0971
17. 3	·0970
17. 40	·0971
18. 36	·0971
20. 23	·0965
21. 19	·0957
21. 38	·0957
22. 11	·0952
23. 7	·0956
23. 59	·0953

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 5	
0. 0	·02833
1. 38	·02780
3. 14	·02668
3. 28	·02597
5. 53	·02470
11. 37	·02377
14. 30	·02380
19. 40	·02480
23. 59	·02484

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 5		
1. 0	52 ·8	52 ·7
3. 0	54 ·5	54 ·2
9. 0	54 ·8	54 ·2
22. 20	53 ·3	53 ·2

Greenwich Mean Solar Time.	Western Declination.
Apr. 6	
h m	° ′ ″
0. 0	20. 56. 5
0. 46	58. 45
	***
1. 29	59. 0
1. 34	58. 35
1. 59	59. 5
3. 2	55. 25
3. 12	55. 45
5. 27	50. 40
5. 48	50. 50
6. 1	50. 0
7. 18	51. 0
7. 56	48. 55
8. 27	51. 30
9. 58	53. 0
10. 23	52. 10
11. 44	51. 10
12. 0	52. 45
12. 15	51. 50
12. 29	52. 10
12. 59	51. 20
13. 35	52. 30
14. 25	50. 50
14. 58	51. 30
16. 25	50. 50
18. 0	48. 30
18. 14	47. 20
19. 41	45. 40
20. 12	46. 50
22. 30	56. 0
22. 59	59. 0
23. 38	59. 10
	(†)
Apr. 7	
	(†)
0. 30	20. 58. 50
1. 8	59. 25
2. 30	57. 5
4. 46	52. 0
5. 1	51. 55
5. 45	50. 0
6. 4	50. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 6	
h m	
0. 0	·0953
1. 0:	·0959
1. 37	·0959
1. 56	·0965
2. 11:	·0968
2. 46	·0963
3. 4	·0964
3. 22	·0969
3. 42	·0969
3. 55	·0972
4. 16	·0973
4. 37	·0970
4. 53	·0971
5. 0	·0970
5. 15	·0972
5. 29	·0971
6. 10	·0973
6. 38	·0972
7. 0	·0973
7. 26	·0973
8. 1	·0980
8. 26	·0977
8. 37	·0975
8. 43	·0976
9. 19	·0973
9. 27	·0975
9. 41	·0974
9. 56	·0983
10. 41	·0975
10. 58	·0975
12. 23	·0972
13. 4	·0975
14. 7	·0971
15. 15	·0973
15. 37	·0971
16. 17	·0974
16. 42	·0974
17. 4	·0975
18. 5	·0976
19. 7	·0973
19. 50	·0971
21. 2	·0958
22. 9	·0954
22. 48	·0956
22. 56	·0947
23. 27	·0942
23. 52	·0943
	(†)
Apr. 7	
	(†)
0. 15	·0943
2. 34	·0955
2. 56	·0953
3. 0	·0965
3. 42	·0966
4. 10	·0964
5. 9	·0969

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 6	
h m	
0. 0	·02484
0. 45	·02500
5. 37	·02443
10. 19	·02304
13. 7	·02297
20. 8	·02291
23. 59	·02224
Apr. 7	
0. 0	·02224
1. 57	·02170
	·02282
4. 37	·02248
	·02292
5. 35	·02283
	·02517
10. 53:	·02514

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 6		
h m	°	°
8. 27	55 ·3	55 ·2
21. 0	54 ·3	55 ·2
Apr. 7		
1. 0	55 ·0	55 ·2
3. 0	55 ·4	55 ·7
9. 0	54 ·3	55 ·2
21. 0	50 ·3	52 ·1

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Apr. 7	
h m	° ′ ″
6. 40	20. 49. 20
7. 6	50. 40
7. 22	50. 10
8. 22	51. 30
8. 30	51. 10
9. 28	51. 55
17. 37	51. 0
20. 12	46. 20
20. 58	47. 45
23. 59	58. 15
Apr. 8	
0. 0	20. 58. 15
1. 8	58. 25
1. 27	58. 0
3. 46	51. 40
5. 25	51. 0
6. 13	51. 30
11. 45	51. 40
12. 14	51. 50
12. 50	50. 20
12. 59	51. 15
13. 14	50. 10
13. 30	50. 45
14. 5	49. 0
16. 29	50. 0
16. 40	51. 10
17. 29	50. 55
19. 46	46. 40
20. 26	46. 55
21. 23	49. 10
23. 48	59. 55
23. 59	59. 20
Apr. 9	
0. 0	20. 59. 20
0. 8	58. 40
0. 13	59. 15
0. 22	59. 10
0. 30	59. 50
1. 27	58. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 7	
h m	
5. 32	·0969
6. 13	·0973
6. 37	·0971
7. 15	·0974
7. 42	·0973
9. 47	·0974
12. 28	·0977
13. 47	·0976
17. 50	·0978
19. 47	·0974
21. 21	·0963
21. 32	·0960
22. 50	·0961
22. 55	·0956
23. 30	·0959
23. 59	·0965
Apr. 8	
0. 0	·0965
0. 18	·0964
1. 8	·0969
1. 35	·0967
2. 11	·0969
2. 38	·0973
3. 23	·0973
4. 20	·0973
5. 0:	·0976
5. 30:	·0972
6. 7	·0977
7. 8	·0978
7. 47	·0975
9. 43	·0978
10. 34	·0980
11. 16	·0981
11. 51	·0980
12. 15	·0982
12. 44	·0978
13. 8	·0984
14. 7	·0977
14. 42	·0979
16. 17	·0978
18. 8	·0981
19. 21	·0977
21. 38	·0963
22. 21	·0961
23. 17	·0965
23. 25	·0962
23. 37	·0964
23. 48	·0970
23. 59	·0966
Apr. 9	
0. 0	·0966
0. 35	(†)
1. 23	·0968
1. 37	·0969
1. 48	·0968

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 7	
h m	
15. 45	·02670
18. 29	·02811
18. 36	·02833
22. 10	·02947
22. 15	·02922
	·02865
23. 59	·02900
Apr. 8	
0. 0	·02900
0. 57	·02908
4. 30	·02934
10. 11	·02950
14. 11	·03016
20. 0	·03000
	·02917
23. 59	·02893
Apr. 9	
0. 0	·02893
3. 5	·02976
	·03017
9. 23	·02840
13. 11:	·02811
17. 31	·02927
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 8		
1. 0	50·4	52·2
3. 0	51·0	52·6
9. 0	51·2	51·6
21. 0	48·2	49·8
22. 0	47·6	49·3
23. 0	48·0	49·5
Apr. 9		
0. 0	48·3	49·6
1. 0	48·4	49·2
2. 0	48·8	49·8
3. 0	49·3	50·2
6. 0	49·5	50·8
9. 0	49·2	51·0

Greenwich Mean Solar Time.	Western Declination.
Apr. 9	
h m	° ′ ″
1. 42	20. 58. 55
2. 15	57. 45
2. 17	58. 0
2. 52	56. 20
3. 2	55. 10
3. 11	55. 0
3. 16	55. 40
3. 45	54. 10
4. 32	53. 5
6. 18	52. 0
10. 15	52. 15
13. 17	52. 5
14. 8	51. 0
14. 37	51. 0
14. 56	51. 40
16. 29	49. 45
17. 7	50. 50
17. 18	50. 10
19. 14	47. 15
19. 25	45. 10
19. 39	46. 45
19. 57	45. 20
20. 51	47. 0
21. 43	51. 0
22. 2	55. 0
22. 21	55. 55
22. 29	57. 35
22. 42	58. 40
22. 56	20. 58. 45
23. 38	21. 3. 50
23. 51	3. 45
23. 59	4. 55
Apr. 10	
0. 0	21. 4. 55
0. 9	6. 45
0. 29	0. 25
0. 59	1. 45
1. 15	1. 10
1. 35	1. 50
1. 45	3. 10
2. 33	0. 45
2. 44	21. 3. 10
3. 12	20. 57. 10
3. 18	57. 15
3. 38	56. 55
3. 46	55. 20
4. 0	55. 0
4. 38	51. 40
5. 3	51. 10
5. 58	47. 55
6. 31	47. 0
6. 50	45. 50
7. 9:	43. 15
7. 17	44. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 9	
h m	
2. 17	·0973
2. 25	·0972
2. 53	·0972
	(†)
5. 30	·0980
5. 45	·0980
6. 19	·0983
8. 52	·0984
9. 33	·0983
11. 51	·0982
12. 31	·0983
13. 22	·0982
14. 6	·0984
15. 19	·0981
15. 42	·0983
16. 57	·0982
17. 51	·0987
18. 0	·0987
18. 30	·0986
19. 38	·0984
19. 49	·0985
21. 7	·0971
21. 29	·0963
21. 35	·0960
22. 23	·0960
22. 33	·0956
22. 43	·0962
23. 8	·0958
23. 17	·0961
23. 28	·0959
23. 35	·0960
23. 44	·0958
23. 51	·0960
23. 59	·0957
Apr. 10	
0. 0	·0957
0. 6	·0957
0. 17	·0963
0. 29	·0960
1. 48	·0964
1. 56	·0966
2. 4	·0963
2. 8	·0965
2. 22	·0959
2. 28	·0963
2. 41	·0957
3. 23	·0963
3. 33	·0959
3. 52	·0970
4. 2	·0971
4. 22	·0976
5. 13	·0971
5. 30:	·0967
5. 56	·0976
6. 0	·0970
6. 19	·0977

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 9	
h m	
21. 0	·02758*
Apr. 10	
	(†)
1. 0	·02805*
1. 44	·02615
2. 40	·02582
4. 39	·02574
7. 27	·02320
9. 45	·02330
10. 7	·02342
14. 34	·02277
14. 50	·02252
15. 5	·02266
15. 42	·02240
16. 3	·02235
	(†)
21. 0	·02505*
23. 38	·02758
23. 59	·02802

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 9		
12. 0	48·5	50·4
18. 0	46·8	48·2
21. 0	47·3	48·7
22. 0	47·5	49·2
23. 0	47·8	49·5
Apr. 10		
0. 0	48·1	49·7
1. 0	48·2	49·8
2. 0	49·2	50·7
3. 0	50·2	51·5
9. 0	52·5	53·8
21. 0	48·2	49·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 10		Apr. 10						
h m	° ′ ″	h m		h m		h m	°	°
8. 48	20. 44. 45	6. 26	·0974					
9. 3	39. 40	6. 45	·0981					
9. 23	42. 0	6. 53	·0974					
9. 28	42. 5	7. 2	·0978					
9. 45	40. 50	7. 15	·0976					
9. 54	41. 0	7. 30	·0978					
10. 30	39. 15	7. 41	·0976					
11. 13	40. 10	7. 52	·0983					
	(†)	8. 5	·0976					
21. 0	51. 21*	8. 13	·0982					
		8. 23	·0978					
		8. 37	·0981					
		8. 55	·0975					
		9. 11	·0978					
		9. 34	·0972					
		10. 5	·0975					
		10. 15	·0973					
		10. 56	·0978					
		11. 37	·0975					
		11. 45	·0977					
		11. 55	·0975					
		12. 19	·0979					
		12. 41	·0975					
		13. 7	·0979					
		13. 17	·0975					
		13. 27	·0975					
			(†)					
		23. 45	·0941					
		23. 59	·0942					
Apr. 11		Apr. 11		Apr. 11		Apr. 11		
0. 0	20. 59. 25	0. 0	·0942	0. 0	·02802	1. 0	48 ·2	49 ·5
0. 13	20. 59. 40	0. 31	·0948	1. 36	·02920	3. 0	48 ·9	50 ·5
0. 55	21. 2. 0	0. 39	·0946	2. 14	·02934	9. 0	47 ·0	48 ·3
1. 28	1. 30	1. 0	·0954	2. 51	·03017	21. 0	42 ·2	44 ·3
1. 36:	0. 40	1. 23	·0954	3. 40	·02964			
1. 44	1. 30	1. 45	·0962	6. 32	·02908			
1. 45	1. 0	2. 7	·0964	7. 17	·02920			
1. 58	1. 50	2. 23	·0969	9. 50	·02852			
2. 15	0. 0	2. 37	·0968	11. 44	·02871			
2. 36	21. 1. 20	2. 52	·0989	12. 26	·02830			
	(†)	3. 6	·0971	14. 54	·02971			
3. 0	20. 59. 23*	3. 23	·0990	16. 14	·03012			
9. 0	44. 4*	3. 40	·0970	16. 57	·02990			
21. 0	45. 0*	4. 20	·0956	19. 56	{·03010			
		4. 37	·0970		{·02974			
		4. 50	·0963	21. 5	{·03018			
		5. 6	·0970		{·02806			
		5. 10	·0968	22. 5	{·02802			
		5. 20	·0971		{·02730			
		5. 30	·0966	23. 59	·02732			
		5. 38	·0968					
		6. 43	·0953					
		7. 7	·0951					
		7. 11	·0943					
		7. 30	·0966					
		7. 53	·0961					
		8. 4	·0967					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Apr. 11						
h m	° ′ ″	h m		h m		h m	°	°
		8. 19	·0962					
		8. 34	·0965					
		9. 0	·0966					
		9. 39	·0971					
		9. 46	·0968					
		10. 7	·0972					
		10. 31	·0967					
		10. 57	·0970					
		11. 31	·0971					
		12. 5	·0987					
		12. 20	·0975					
		13. 41	·0970					
		17. 7:	·0986					
		18. 4	·0966					
		18. 8	·0968					
		18. 14	·0960					
		18. 54	·0977					
		19. 18	·0974					
		20. 19	·0970					
		21. 49	·0965					
		22. 1	·0962					
		22. 18	·0965					
		22. 53	·0964					
		23. 3	·0958					
		23. 59	·0961					
Apr. 12		Apr. 12		Apr. 12		Apr. 12		
	(†)	0. 0	·0961	0. 0	·02732	1. 0	45 ·0	45 ·3
0. 31	20. 56. 10	0. 42	·0967	1. 48	·02705	3. 0	46 ·8	48 ·6
0. 47	57. 5	1. 10	·0967	2. 7	·02654	9. 0	47 ·3	49 ·0
1. 9	56. 10	1. 46	·0972	2. 24	·02633	21. 0	39 ·5	42 ·0
1. 38	56. 15	2. 9	·0972	2. 45	·02550			
	***	2. 21	·0982	5. 2	·02258			
5. 43	45. 30	2. 38	·0982	11. 57	·02280			
6. 44	45. 5	2. 49	·0979	13. 39	·02312			
	(†)	3. 1	·0984	18. 0	·02610			
9. 0	45. 52*	3. 9	·0982	20. 8	·02723			
18. 30	43. 35	3. 51	·0987	21. 15	·02820			
19. 6	42. 10	4. 25	·0984	21. 48	·02842			
20. 52	46. 10	4. 38	·0985	22. 46	·02882			
	(†)	5. 8	·0976	23. 59	·02890			
21. 0	44. 41*	5. 25	·0976					
	(†)	5. 34	·0973					
22. 0	47. 50	5. 53	·0978					
23. 1	49. 10	6. 10	·0972					
23. 59	53. 50	6. 51	·0974					
		7. 10	·0977					
		7. 33	·0974					
		8. 8	·0960					
		8. 38	·0969					
		9. 47	·0967					
		9. 56	·0969					
		10. 15	·0967					
		10. 32	·0969					
		12. 4	·0972					
		12. 16	·0971					
		12. 28	·0976					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	h m		h m		h m	°	°
		Apr. 12						
		12. 49	·0971					
		13. 8	·0976					
		13. 13	·0973					
		13. 20	·0976					
		13. 30	·0970					
		13. 43	·0972					
		13. 58	·0969					
		14. 46	·0973					
		15. 1	·0970					
		16. 33	·0971					
		17. 9	·0973					
		18. 4	·0973					
		18. 52	·0969					
		21. 8	·0950					
		21. 19	·0953					
		23. 0	·0952					
		23. 59	·0958					
Apr. 13		Apr. 13		Apr. 13		Apr. 13		
0. 0	20. 53. 50	0. 0	·0958	0. 0	·02890	8. 30	46 ·9	47 ·2
0. 14	54. 20	1. 43	·0971	2. 56:	·02877	21. 0	41 ·0	43 ·1
0. 56	55. 10	4. 30	·0976	6. 1	·02654			
1. 44	55. 0	4. 56	·0980	10. 4	·02260			
4. 21	48. 30	5. 35	·0979	16. 23	·02320			
5. 28	47. 0	6. 10	·0984	22. 26	·02500			
9. 35	46. 50	6. 33	·0982		·02583			
10. 52	47. 50	7. 31	·0983	23. 59	·02570			
11. 0	49. 0	7. 52	·0985					
14. 22	47. 50	8. 19	·0981					
16. 59	45. 15	9. 43	·0975					
18. 39	42. 30	9. 58	·0973					
19. 35	42. 20	10. 10	·0974					
22. 58	54. 40	11. 26	·0975					
23. 15	56. 40	11. 40	·0977					
	(†)	11. 55	·0974					
		13. 8	·0977					
		17. 52	·0977					
		20. 38	·0953					
		21. 39	·0953					
		22. 59	·0957					
			(†)					
Apr. 14		Apr. 14		Apr. 14		Apr. 14		
	(†)		(†)	0. 0	·02570	1. 0	43 ·4	44 ·0
0. 7	20. 54. 50	0. 9	·0964	2. 25	·02518	3. 0	45 ·0	45 ·7
0. 32	55. 0	1. 0	·0976	3. 39	·02410	9. 0	46 ·0	47 ·0
0. 39	56. 30	1. 22	·0972	4. 10	·02378	21. 0	41 ·2	44 ·0
1. 5	56. 50	1. 43	·0975		·02452			
1. 23	55. 55	1. 52	·0976	4. 33	·02415			
2. 5	55. 10	2. 16	·0981	6. 44	·02502			
2. 44	53. 20	2. 37	·0977	8. 37	·02466			
4. 39	49. 15	4. 3	·0996	8. 52	·02480			
4. 58	50. 0	4. 37	·0978	9. 37	·02438			
5. 3	49. 10	4. 52	·0982	12. 0	·02415			
5. 59	48. 50	5. 24:	·0964	12. 29	·02384			
6. 47	46. 35	5. 47	·0968	18. 11	·02552			
	(†)	6. 4	·0963	21. 1	·02693			
9. 0	42. 36*	6. 25	·0967	22. 35	·02746			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	h m		h m		h m	°	°
Apr. 14		Apr. 14		Apr. 14				
17. 15	20. 49. 15	6. 47	·0958	23. 4	·02738			
17. 37	48. 10	6. 56	·0959		·02678			
18. 27	49. 50	7. 10	·0953	23. 59	·02684			
18. 34	47. 55	7. 37	·0963					
19. 13	46. 0	7. 53	·0960					
19. 30	44. 0	8. 26	·0962					
20. 17	44. 0	8. 34	·0960					
21. 5	45. 40	8. 53	·0969					
22. 28	52. 0	9. 6	·0964					
22. 34	52. 0	9. 15	·0972					
23. 12	56. 10	9. 28	·0967					
23. 18	54. 45	10. 40	·0972					
	(†)	11. 35	·0971					
		12. 8	·0982					
		12. 20	·0980					
		12. 33	·0980					
		13. 30	·0970					
		14. 0	·0972					
		14. 20	·0972					
		14. 37	·0976					
		14. 43	·0974					
		14. 52	·0977					
		15. 2	·0974					
		15. 17	·0979					
		15. 29	·0977					
		15. 38	·0978					
		15. 50	·0974					
		16. 4	·0978					
		16. 40	·0978					
		17. 25	·0994					
		18. 19	·0984					
		18. 43	·0976					
		18. 53	·0979					
		18. 59	·0976					
		19. 10	·0983					
		19. 40	·0978					
		19. 50	·0972					
		20. 2	·0971					
		20. 30	·0962					
		20. 38	·0967					
		21. 5	·0962					
		21. 17	·0955					
		21. 38	·0953					
		22. 3	·0956					
		22. 28	·0953					
		23. 7	·0955					
			* * *					
		23. 41	·0953					
			(†)					
Apr. 15		Apr. 15		Apr. 15		Apr. 15		
	(†)		(†)	0. 0	·02684	1. 0	43 ·6	45 ·2
0. 45	20. 55. 0	0. 33	·0954	2. 25	·02742	3. 0	45 ·7	46 ·8
1. 15	55. 0	1. 2	·0962	3. 55	·02660	9. 10	48 ·1	49 ·1
1. 30	56. 45	1. 12	·0962	7. 49	·02315	21. 0	42 ·6	43 ·5
1. 36	55. 10	1. 22	·0960	7. 52	·02332	22. 0	43 ·6	44 ·0
4. 26	50. 0	1. 37	·0967	8. 43	·02327	23. 0	44 ·2	45 ·0
6. 15	47. 5	2. 2	·0962		·02400			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V. F. Magnet.
Apr. 15		Apr. 15		Apr. 15				
h m	° ′ ″	h m		h m		h m	°	°
7. 0	20. 45. 10	2. 32	·0963	9. 53	·02364			
8. 32	46. 10	3. 25	·0962	14. 3	·02385			
	(†)	4. 12	·0967	14. 34	·02362			
9. 10	47. 17*	4. 26	·0963	14. 53	·02374			
18. 35	49. 20	4. 42	·0966	15. 24	·02363			
18. 47	50. 50	6. 20	·0965	20. 6	·02692			
19. 2	47. 55	6. 24	·0967	21. 57	·02828			
19. 16	47. 10	6. 41	·0967	23. 0	·02854			
19. 37	43. 10	6. 53	·0965	23. 59	·02810			
19. 44	45. 50	7. 26	·0973					
19. 59	47. 0	7. 52	·0969					
20. 0	49. 20	8. 26	·0973					
20. 10	50. 0	8. 50	·0970					
20. 15	49. 10	10. 30	·0973					
20. 18	49. 45	10. 53	·0976					
20. 30	49. 0	11. 26	·0970					
21. 5	51. 10	12. 17	·0977					
21. 30	50. 20	12. 34	·0974					
22. 15	55. 0	12. 47	·0977					
22. 45	53. 30	12. 57	·0974					
22. 59	54. 40	13. 8	·0976					
23. 20	54. 40	13. 30	·0972					
	(†)	13. 42	·0974					
23. 53	54. 20	13. 56	·0971					
23. 59	54. 20	14. 33	·0975					
		14. 48	·0968					
		15. 15	·0983					
		15. 30	·0975					
		16. 8	·0973					
		16. 52	·0985					
		17. 8	·0977					
		17. 48	·0978					
		19. 1	·0956					
		19. 28	·0954					
		19. 42	·0959					
		20. 1	·0953					
		20. 10	·0954					
		20. 23	·0949					
		20. 43	·0949					
		21. 7	·0957					
		21. 45	·0949					
		22. 5	·0946					
		22. 17	·0949					
		23. 8	·0924					
		23. 45	·0942					
		23. 59	·0950					
Apr. 16		Apr. 16		Apr. 16		Apr. 16		
0. 0	20. 54. 20	0. 0	·0950	0. 0	·02810	0. 0	45 ·2	45 ·9
0. 17	54. 40	0. 34	·0967	0. 44	·02802	1. 0	46 ·2	46 ·8
0. 38	58. 0	0. 43	·0956	0. 53	·02778	2. 0	47 ·3	47 ·6
0. 47	56. 30	1. 12	·0972	1. 7	·02776	3. 0	47 ·9	48 ·1
1. 12	59. 10	1. 34	·0966	1. 39	·02755	6. 0	50 ·0	49 ·9
1. 45	57. 25	1. 51	·0965	4. 38	·02460	9. 0	50 ·5	51 ·0
2. 0	58. 5	2. 14	·0956	4. 43	·02563	12. 0	49 ·5	51 ·0
2. 15	57. 0	2. 35	·0973	9. 0	·02532	18. 0	48 ·3	49 ·5
2. 40	57. 15	3. 21	·0967	11. 43	·02523	21. 0	49 ·0	50 ·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V. F. Magnet.
Apr. 16		Apr. 16		Apr. 16		Apr. 16		
h m	° ′ ″	h m		h m		h m	°	°
3. 15	20. 53. 0	3. 38	·0973	12. 20	·02480	22. 0	49 ·6	50 ·8
3. 39	50. 40	3. 50	·0973	12. 36	·02478	23. 0	50 ·3	51 ·3
4. 37	50. 40	4. 12	·0978	12. 51	·02458			
6. 57	46. 30	4. 51	·0971	14. 54	·02462			
	(†)	5. 1	·0973	18. 47	·02553			
9. 0	42. 53*	5. 12	·0970	19. 30	·02527			
15. 54	47. 0	5. 56	·0973	21. 58	·02502			
16. 58	44. 20	6. 40	·0966	22. 27	·02443			
17. 3	45. 0	7. 2	·0968	22. 38	·02445			
17. 53	44. 40	7. 23	·0964	23. 23	·02403			
18. 20	46. 50	7. 45	·0969		(†)			
19. 23	43. 40	9. 0	·0968					
21. 42	48. 30	9. 39	·0978					
22. 59	53. 25	10. 7	·0968					
	(†)	10. 32	·0970					
		10. 58	·0967					
		11. 7	·0971					
		11. 38	·0970					
		12. 3	·0983					
		12. 13	·0977					
		12. 35	·0987					
		12. 53	·0977					
		13. 7	·0981					
		14. 7	·0969					
		14. 36	·0977					
		14. 52	·0966					
		15. 3	·0967					
		15. 26:	·0958					
		16. 5	·0965					
		16. 47	·0975					
		17. 36	·0965					
		17. 50	·0971					
		18. 18	·0961					
		18. 23	·0965					
		19. 33	·0954					
		19. 38	·0955					
		20. 1	·0949					
		21. 8	·0948					
		21. 58	·0943					
		22. 49	·0942					
		23. 7	·0946					
		23. 19	·0943					
		23. 40	·0948					
			(†)					
Apr. 17		Apr. 17		Apr. 17		Apr. 17		
0. 0	20. 53. 55	1. 0	·0954*	1. 0	·02449*	0. 0	51 ·4	52 ·1
1. 34	56. 55	3. 0	·0967*	3. 0	·02740	1. 0	52 ·8	52 ·5
3. 20	51. 0	9. 13	·0994*	9. 13	·02866*	2. 0	53 ·5	53 ·6
5. 35	47. 25	21. 0	·0987*	21. 0	·03017*	3. 0	54 ·5	54 ·7
	(†)				(†)	9. 13	54 ·6	55 ·1
9. 13	46. 57			22. 30	·02970	21. 0	49 ·0	50 ·5
21. 0	45. 6*			23. 59	·02890			
22. 0	47. 10							
22. 40	47. 25							
23. 59	49. 45							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

April 17 and 18. The Photographic Traces for the Horizontal Force Magnet were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 18		Apr. 18		Apr. 18		Apr. 18		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 50. 0	7. 25	·0989*	0. 0	·02890	7. 25	54 ·0	54 ·8
1. 14	51. 50	21. 0	·0981	2. 7	·02797	21. 0	52 ·1	53 ·4
3. 24	48. 15			8. 23	·02364			
5. 57	45. 30				·02446			
17. 3	44. 10			13. 36:	·02337			
17. 40	43. 25			18. 13	·02385			
19. 50	42. 50			20. 46	·02425			
20. 25	43. 40				(†)			
	(†)			21. 0	·02439*			
21. 0	42. 42*			23. 17	·02356			
22. 29	50. 15			23. 59	·02384			
22. 58	56. 50							
	(†)							
Apr. 19		Apr. 19		Apr. 19		Apr. 19		
0. 0	20. 51. 55		(†)	0. 0	·02384	1. 0	54 ·3	54 ·7
1. 8	53. 30	1. 0	·0977*	2. 53	·02262	3. 0	55 ·4	55 ·4
5. 8	48. 10	1. 8	·0975		·02383	9. 0	55 ·8	57 ·0
7. 18	47. 0	2. 46	·0989	4. 0	·02338	21. 0	54 ·5	55 ·1
11. 27	47. 0	3. 15	·0988	4. 12	·02356			
11. 41	46. 0	3. 36	·0992	18. 9	·02392			
12. 15	46. 0	5. 49	·0988	21. 52	·02450			
12. 56	44. 35	7. 2	·0990	23. 59	·02432			
13. 34	45. 20	7. 45	·0991					
14. 16	45. 30	9. 7	·0988					
14. 45	44. 40	9. 22	·0992					
19. 57	43. 40	9. 41	·0990					
21. 22	45. 10	10. 8	·0992					
	(†)	10. 46	·0991					
22. 29	45. 20	11. 22	·0995					
23. 59	51. 20	12. 4	·0989					
		12. 31	·0992					
		13. 19	·0988					
		13. 7	·0988					
		17. 0	·0992					
		17. 13	·0996					
		19. 32	·0996					
		21. 25	·0982					
		22. 0	·0977					
		23. 18	·0974					
		23. 59	·0977					
Apr. 20		Apr. 20		Apr. 20		Apr. 20		
0. 0	20. 51. 15	0. 0	·0977	0. 0	·02432	8. 30	53 ·0	53 ·1
1. 22	53. 20	0. 40	·0980	2. 51	·02384	21. 0	54 ·0	53 ·9
7. 0	47. 35	2. 1	·0991	5. 31	·02230			
13. 14	48. 20	2. 20	·0991	5. 47	·02231			
13. 29	47. 35	2. 30	·0989	5. 51	·02286			
13. 50	49. 30	2. 41	·0993	6. 37	·02264			
14. 17	48. 0	3. 8	·0990	6. 48	·02292			
14. 28	48. 55	3. 36	·0995	7. 29	·02288			
14. 38	48. 20	5. 6	·0995	7. 55	·02310			
15. 40	43. 20	5. 38	·0998	12. 50	·02355			
16. 40	44. 0	6. 4	·0994	13. 58	·02402			
		6. 53	·0994	15. 8	·02440			
18. 29	42. 50	7. 26	·0992	20. 8	·02772			
20. 22	43. 40	7. 48	·0995	22. 34	·02830			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 20		Apr. 20		Apr. 20				
h m	° ′ ″	h m		h m		h m	°	°
21. 45	20. 47. 10	8. 17	·0995	23. 18	·02792			
22. 3	49. 15	9. 7	·0997		·02855			
22. 18	49. 0	9. 43	·0992	23. 59	·02818			
23. 30	54. 35	12. 13	·0998					
23. 55	53. 50	12. 28	·0994					
23. 59	54. 0	13. 20	·0998					
		13. 57	·0997					
		14. 15	·1001					
		14. 43	·0997					
		15. 25	·1000					
		16. 26	·0995					
		18. 16	·0997					
		19. 26	·0989					
		20. 46	·0983					
		21. 26	·0980					
		21. 40	·0982					
		22. 27	·0975					
		22. 55	·0980					
		23. 13	·0981					
		23. 43	·0992					
		23. 59	·0979					
Apr. 21		Apr. 21		Apr. 21		Apr. 21		
0. 0	20. 54. 45	0. 0	·0979	0. 0	·02818	1. 0	56 ·5	57 ·3
0. 15	54. 0	0. 8	·0974	0. 29	·02766	3. 0	57 ·8	58 ·9
0. 29	53. 40	0. 17	·0977		(†)	9. 0	59 ·0	60 ·0
0. 59	55. 0	0. 33	·0972	1. 0	·02741*	21. 0	54 ·8	54 ·9
1. 9	54. 35	0. 39	·0974	2. 3	·02640			
1. 29	55. 55	1. 19	·0987	4. 38	·02418			
2. 12	53. 0	1. 28	·0985	4. 45	·02512			
2. 30	53. 50		(†)	5. 14	·02480			
2. 45	52. 10	2. 35	·0968	11. 46	·02564			
2. 59	53. 30	2. 47	·0973	12. 32	·02552			
3. 14	52. 0	2. 55	·0969	14. 3	·02690			
3. 20	53. 0	3. 15	·0986	18. 43	·03037			
3. 40	51. 10	3. 38	·1000	21. 9	·03026			
4. 0	52. 50	3. 55	·0980		·02958			
6. 16	49. 0	4. 22	·0990	23. 1	·02932			
8. 40	43. 50	5. 2	·0995	23. 59	·02864			
9. 59	47. 0	5. 23	·0983					
10. 57	46. 10	5. 38	·0990					
11. 12	43. 40	5. 52	·0988					
11. 30	45. 50	6. 22	·0999					
11. 56	39. 20	6. 38	·0990					
12. 10	41. 10	6. 49	·0993					
12. 29	36. 20	7. 1	·0990					
12. 39	38. 5	7. 21	·0994					
17. 11	43. 15	7. 53	·0991					
17. 24	43. 0	8. 3	·0992					
17. 41	44. 5	8. 32	·0985					
18. 0	42. 45	8. 45	·0986					
18. 22	44. 25	8. 54	·0982					
18. 42	42. 45							
19. 12	46. 30	10. 22	·0998					
20. 2	45. 20	10. 33	·0994					
20. 50	46. 0	11. 0	·1004					
21. 39	48. 20	11. 19	·0997					
22. 30	53. 40	11. 37	·1003					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr.21		Apr.21						
h m	° ′ ″	h m		h m		h m	°	°
22. 35	20. 53. 0	12. 8	·1030					
22. 50	53. 30	12. 30	·1008					
22. 59	54. 30	12. 37	·1014					
23. 3	53. 10	13. 2	·0997					
23. 15	54. 35	13. 8	·1002					
23. 46	55. 0	13. 15	·0994					
23. 57	54. 0	13. 21	·0997					
23. 59	55. 0	13. 37	·0991					
		13. 59	·0997					
		14. 22	·0990					
		14. 34	·0995					
		14. 47	·0993					
		15. 21	·1008					
		15. 25	·1004					
		15. 37	·1002					
		15. 43	·1004					
		16. 51	·0991					
		16. 56	·0990					
		17. 14	·0999					
		17. 35	·0996					
		17. 43	·0998					
		18. 12	·0986					
		18. 33	·0984					
		19. 4	·0970					
		20. 14	·0979					
		21. 40	·0975					
		21. 55	·0979					
		22. 34	·0968					
		23. 5	·0947					
		23. 37	·0974					
		23. 59	·0981					
Apr.22		Apr.22		Apr.22		Apr.22		
0. 0	20. 55. 0	0. 0	·0981	0. 0	·02864	1. 0	57·6	57·2
1. 40	54. 50	0. 7	·0982	1. 34	·02754	3. 0	58·0	57·9
2. 1	54. 0	0. 31	·0981	2. 52	·02750	9. 0	56·8	58·3
2. 10	53. 20	0. 42	·0977	8. 39:	·02533	21. 0	52·4	53·5
2. 35	43. 40	0. 56	·0980	13. 2	·02698	22. 0	53·3	53·8
3. 0	50. 40	1. 3	·0978	17. 36	·03000	23. 0	54·0	54·2
3. 33	49. 35	1. 34:	·0984	19. 38	{·03003			
3. 45	51. 50	1. 53	·0969		{·02972			
4. 0	49. 55	2. 8	·0977	21. 5	{·02957			
4. 6	50. 20	2. 23	·0971		{·02904			
4. 18	49. 0	3. 18	·0982	22. 3	{·02926			
4. 33	49. 25	3. 53	·0972		{·02757			
5. 0	48. 0	4. 5	·0974	23. 59	·02548			
5. 15	48. 55	4. 15	·0962					
9. 27	48. 0	4. 25	·0970					
9. 41	47. 5	4. 35	·0966					
10. 45	48. 0	5. 10	·0979					
12. 23	47. 45	5. 24	·0979					
	(†)	5. 52	·0986					
15. 0	46. 0	6. 30	·0987					
17. 6	45. 0	6. 50	·0985					
17. 33	42. 55	8. 8	·0991					
17. 52	43. 40	9. 1	·0988					
18. 15	43. 10	9. 30	·0991					
18. 32	44. 20	9. 40	·0990 ***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr.22		Apr.22						
h m	° ′ ″	h m		h m		h m	°	°
18. 43	20. 44. 20	11. 52	·0992					
19. 10	48. 20	12. 24	·0995					
19. 45	49. 10	12. 48	·1000					
20. 2	47. 10	13. 55	·0985					
20. 14	48. 45	14. 32	·0991					
20. 29	48. 10	15. 13	·0988					
20. 54	48. 50	17. 20	·0991					
21. 3	50. 15	17. 45	·0988					
21. 38	49. 40	17. 57	·0981					
22. 3	51. 55	18. 31	·0978					
22. 47	50. 55	19. 30	·0988					
22. 54	51. 10	19. 38	·0984					
23. 29	51. 40	19. 58	·0989					
	(†)	20. 54	·0977					
		21. 4	·0976					
		21. 11	·0968					
		21. 22	·0968					
		21. 47	·0977					
		22. 34	·0981					
			(†)					
Apr.23		Apr.23		Apr.23		Apr.23		
	(†)		(†)	0. 0	·02548	0. 0	55·2	55·3
1. 0	20. 54. 5	0. 39	·0982	0. 21	·02540	1. 0	55·4	55·7
2. 44	50. 40	1. 45	·0987	0. 43	·02500	2. 0	56·3	57·0
2. 59	51. 0	2. 0	·0984	2. 7	·02412	3. 0	57·5	58·3
3. 24	49. 10	2. 47	·0982	4. 46	·02081	6. 0	59·4	60·3
3. 32	49. 40	3. 7	·0994	5. 22	·02120	9. 0	59·0	59·8
5. 5	44. 50	3. 22	·0985	7. 37	{·02160	12. 0	57·7	58·3
5. 18	45. 15	3. 43	·0996		{·02225	18. 0	53·2	54·5
6. 50	43. 40	4. 10	·0974	8. 7	·02132	21. 0	52·9	54·0
9. 55	47. 0	4. 57	·0997	11. 18	{·02196	22. 0	53·8	54·5
10. 48	45. 30	5. 18	·0990		{·02300	23. 0	54·0	54·6
11. 24	45. 10		***	12. 37	·02290			
12. 0	47. 10	5. 58	·0996	15. 43	·02463			
12. 18	44. 25	6. 8	·0993	18. 52	·02758			
12. 30	43. 0	6. 25	·0992	21. 14	·02864			
12. 59	42. 50	6. 47	·0998		(†)			
13. 25	45. 15	7. 12	·0990					
13. 51	44. 40	7. 27	·0992					
14. 55	46. 15	7. 37	·0996					
15. 45	45. 50	7. 48	·0991					
16. 15	45. 50	9. 39	·0991					
16. 24	44. 50	9. 55	·0997					
16. 44	45. 10	10. 17	·0994					
17. 22	44. 20	10. 37	·1000					
17. 40	44. 5	10. 53	·1001					
18. 2	42. 50	11. 13	·0998					
		11. 53	·1012					
20. 44	43. 10	13. 13	·0999					
21. 3	44. 20	12. 56	·0986					
21. 15	44. 0	13. 8	·0989					
	(†)	13. 21	·0986 ***					
		14. 2	·0990 ***					
		15. 22	·0997					
		15. 50	·0992 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Apr. 24	
1. 0	21. 0. 30*
3. 0	20. 55. 53*
9. 0	53. 40*
21. 0	51. 54*
23. 44	58. 15
23. 55	57. 50
23. 59	58. 5
Apr. 25	
0. 0	20. 58. 10
0. 29	21. 0. 20
0. 33	0. 0
0. 45	0. 50
1. 5	0. 25
1. 43	21. 0. 45
2. 59	20. 55. 10
3. 10	55. 30
3. 29	54. 50
3. 58	55. 50
4. 43	52. 15
	***
6. 35	50. 55
	***
9. 40	49. 50
10. 44	51. 0
11. 9	54. 40
12. 30	50. 15
14. 10	51. 0
14. 43	56. 50
19. 3	47. 50
19. 52	47. 55
20. 40	48. 40
21. 55	51. 50
22. 16	54. 10
22. 59	55. 45
23. 33	52. 50
23. 59	57. 45
Apr. 26	
0. 0	20. 57. 45
0. 13	58. 10
3. 18	53. 45
6. 33	50. 40
9. 16	52. 30
10. 59	51. 15
16. 12	51. 0
16. 24	49. 20
16. 31	50. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 23	
h m	
18. 10	·0997
	***
20. 4	·0997
20. 21	·0994
20. 38	·0995
20. 53	·0993
21. 23	·0994
	(†)
Apr. 24	
1. 0	·0987*
3. 0	·0981*
9. 0	·0992*
21. 0	·0991*
Apr. 25	
1. 0	·0991
3. 0	·0990
9. 0	·0998
21. 0	·0985
Apr. 26	
1. 0	·0989*
3. 0	·0990*
9. 0	·1003
22. 0	·0988*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 24	
1. 0	·02504*
3. 0	·02343*
9. 0	·02061*
21. 0	·02378*
	(†)
23. 40	·02532
23. 59	·02563
Apr. 25	
0. 0	·02563
1. 13	·02578
3. 46	·02026
5. 13	·01924
6. 0	·01960
11. 3	·02055
13. 52	·02148
21. 0	·02624
23. 59	·02631
Apr. 26	
0. 0	·02631
2. 6	·02700
3. 10	·02642
3. 51	·02560
	·02406
6. 58	·02020
7. 54	·01917
	·01943
8. 53	·01882

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 24		
0. 0	55 ·0	55 ·3
1. 0	56 ·0	56 ·3
2. 0	57 ·1	57 ·0
3. 0	58 ·0	57 ·8
9. 0	60 ·0	60 ·5
21. 0	55 ·9	56 ·0
Apr. 25		
1. 0	59 ·3	60 ·1
3. 0	63 ·0	64 ·8
9. 0	67 ·2	67 ·2
21. 0	59 ·8	60 ·7
Apr. 26		
1. 0	61 ·1	62 ·0
3. 0	63 ·3	65 ·0
9. 0	64 ·0	65 ·5
22. 0	56 ·0	57 ·0

Greenwich Mean Solar Time.	Western Declination.
Apr. 26	° ′ ″
h m	
16. 48	20. 49. 45
17. 30	49. 45
17. 50	48. 15
18. 8	49. 0
18. 18	46. 30
18. 30	47. 15
18. 35	46. 0
	***
19. 29	51. 5
	***
20. 45	50. 30
	***
22. 17	55. 20
22. 23	54. 50
22. 46	56. 50
23. 15	56. 45
23. 31	58. 10
23. 59	57. 35
Apr. 27	
0. 0	20. 57. 15
0. 18	20. 59. 0
1. 15	21. 0. 25
1. 49	20. 58. 10
2. 4	58. 20
	***
4. 40	53. 15
4. 49	53. 30
6. 27	48. 50
6. 44	46. 5
7. 6	45. 55
7. 16	47. 20
7. 32	46. 5
8. 28	48. 0
8. 58	38. 15
9. 21	45. 15
9. 44	41. 55
10. 0	41. 0
10. 15	42. 50
10. 44	40. 20
11. 5	40. 50
12. 15	33. 15
	***
13. 13	43. 10
14. 0	38. 0
14. 12	40. 0
14. 16	39. 25
14. 28	40. 40
14. 34	40. 10
15. 27	43. 20
15. 32	43. 0
15. 45	43. 10
15. 57	46. 0
16. 3	45. 40
16. 39	53. 45
16. 59	50. 50
	***
17. 37	48. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Apr. 27	
8. 0	·1026*
21. 0	·0993*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 26	
h m	
8. 57	·01967
13. 26	·02175
	·02226
17. 50	·02742
18. 1	·02725
19. 23	·02718
20. 14	·02698
23. 59	·02661
Apr. 27	
0. 0	·02661
0. 44	·02658
2. 42	·02592
4. 26	·02333
7. 46	·01800
11. 50	·01823
12. 48	·01857
	·01911
14. 0	·01915
15. 59	·02092
17. 55	·02303
	·02180
20. 32	·02402
	·02498
21. 36	·02565
23. 59	·02446

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 27		
8. 0	63 ·5	64 ·3
21. 0	56 ·0	56 ·9

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 24. The photographic registration of the movements of the three Magnetometers was interrupted during this day, in consequence of the gas-pipes being under repair.

April 25, 26, 27. The Photographic Traces for the Horizontal Force Magnet were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 27								
h m	° ′ ″	h m		h m		h m	°	°
18. 7	20. 48. 50							
18. 14	49. 50							
18. 21	48. 45							
18. 32	50. 10							
19. 7	50. 20							
19. 33	54. 40							
20. 2	56. 20							
20. 43	20. 54. 0							
22. 28:	21. 5. 10							
23. 20	21. 0. 45							
23. 41	20. 56. 5							
23. 59	56. 45							
Apr. 28		Apr. 28		Apr. 28		Apr. 28		
0. 0	20. 56. 50		(†)	0. 0	·02446	1. 0	60 ·6	61 ·0
0. 3	20. 56. 50	1. 0	·1019*	0. 22	·02417	3. 0	65 ·0	65 ·2
0. 5	21. 1. 55	2. 8	·0953	0. 30	·02388	9. 0	65 ·4	65 ·4
0. 33	1. 50	3. 23	·0972	1. 31	·02279	21. 0	56 ·8	57 ·3
	(†)	4. 4	·0964	1. 43	·02240			
1. 0	0. 45*	4. 9	·0960	2. 14	·02231			
1. 59	0. 30	4. 22	·0972	4. 10	·01920			
2. 16	21. 0. 20	4. 36	·0975	4. 36	·01881			
3. 0	20. 59. 45	5. 2	·0959	5. 6	·01897			
3. 30	21. 0. 0	5. 17	·0965	7. 4	·01938			
4. 14	20. 57. 25	5. 23	·0960	9. 29	·01935			
4. 23	58. 0	5. 49	·0970	10. 23	·01946			
4. 51	57. 0	7. 1	·0968	10. 41	·01914			
5. 8	54. 10	7. 7	·0971	11. 24	·01920			
5. 32	53. 55	7. 20	·0963	12. 14	{ ·01962			
5. 44	52. 0	7. 43	·0965		{ ·02020			
5. 58	51. 50	8. 0	·0974	14. 5	·02138			
6. 5	52. 45	8. 15	·0971	15. 30	·02260			
6. 28	48. 50	8. 27	·0974	19. 22	·02762			
7. 13	51. 20	8. 56	·0960	22. 53	·02743			
7. 27	50. 0	9. 38	·0967	23. 59	·02625			
7. 38	51. 0	10. 7	·0961					
8. 26	49. 10	10. 20	·0969					
8. 51	52. 15	10. 29	·0962					
9. 5	50. 50	11. 5	·0974					
9. 47	52. 0	12. 21	·0958					
10. 15	47. 10	12. 38	·0962					
10. 30	57. 0	12. 52	·0961					
10. 51	50. 0	13. 31	·0968					
11. 12	45. 10	13. 52	·0962					
11. 30	43. 40	14. 48	·0971					
12. 30	52. 5	15. 34	·0969					
12. 59	52. 50	15. 53	·0972					
13. 45	54. 30	16. 30	·0970					
13. 58	55. 50	17. 4	·0974					
	* *	17. 56	·0973					
15. 0	51. 50	18. 14	·0977					
16. 29	52. 0	18. 24	·0974					
16. 44	51. 0	18. 42	·0979					
17. 5	51. 0	19. 47	·0969					
17. 28	52. 15	20. 39	·0967					
17. 53	51. 55	21. 38	·0950					
18. 0	51. 0	22. 0	·0950					
18. 12	53. 5	22. 34	·0952					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 28		Apr. 28						
h m	° ′ ″	h m		h m		h m	°	°
18. 27	20. 50. 45	23. 11	·0963					
18. 50	51. 10		(†)					
19. 0	50. 35							
19. 23	51. 50							
19. 55	49. 0							
20. 32	49. 20							
21. 32	55. 0							
21. 45	20. 58. 0							
22. 22	21. 0. 0							
22. 56	20. 59. 45							
23. 35	21. 1. 10							
23. 47	0. 40							
	(†)							
Apr. 29				Apr. 29		Apr. 29		
	(†)			0. 0	·02625	1. 0	61 ·4	61 ·0
0. 30	21. 0. 10			1. 30	·02508	3. 0	64 ·0	64 ·5
1. 0	0. 30			2. 1	·02415	9. 0	63 ·3	63 ·2
1. 33	21. 1. 20			2. 50	·02333	21. 0	56 ·7	56 ·5
3. 9	20. 56. 15			5. 4	·01960	22. 0	57 ·6	57 ·3
4. 8	52. 0			6. 6	·01855	23. 0	58 ·8	58 ·3
6. 33	50. 50			6. 12	·01860			
9. 0	52. 55			6. 18	·01852			
	(†)			6. 28	·01876			
13. 29	45. 15			6. 50	·01860			
14. 14	45. 55			9. 54	·01890			
15. 25	48. 50			11. 37	·01962			
15. 40	47. 35			12. 48	·02058			
15. 59	47. 50			13. 17	·02077			
16. 29	51. 20			15. 53	·02363			
17. 15	51. 50			18. 47	·02732			
17. 58	50. 25			19. 30	{ ·02730			
18. 14	48. 30				{ ·02681			
18. 27	49. 10			22. 37	·02648			
18. 43	48. 25			23. 59	·02560			
18. 59	49. 25							
19. 15	49. 0							
20. 45	51. 35							
21. 45	57. 0							
22. 15	20. 57. 40							
23. 27	21. 1. 10							
23. 59	1. 0							
Apr. 30		Apr. 30		Apr. 30		Apr. 30		
0. 0	21. 1. 0		(†)	0. 0	·02560	0. 0	60 ·3	59 ·4
1. 36	21. 2. 0	2. 7	·1257	1. 22	·02444	1. 0	63 ·1	61 ·0
2. 15	20. 58. 30	2. 54	·1262	1. 27	·02420	2. 0	65 ·7	62 ·7
3. 8	56. 45	3. 13	·1263	2. 1	·02356	3. 0	66 ·0	64 ·0
3. 32	56. 40	3. 30	·1268	2. 16	·02350	6. 0	67 ·5	66 ·8
4. 13	55. 0	4. 10	·1270	6. 18	·01690	9. 0	64 ·0	65 ·8
4. 30	55. 55	4. 23	·1264	6. 43	·01731	12. 0	62 ·0	63 ·0
5. 39	53. 40	4. 33	·1268	8. 22	·01770	18. 0	58 ·0	58 ·7
5. 58	53. 45	4. 53	·1264	11. 8	·01928	21. 0	58 ·0	58 ·9
6. 2	53. 0	6. 4	·1268	13. 48	·02174	22. 0	59 ·1	59 ·8
6. 13	49. 50	6. 30	·1280	14. 16	·02195	23. 0	60 ·0	60 ·5
6. 28	48. 10	6. 52	·1268	19. 16	·02611			
6. 30	50. 40	7. 22	·1264	23. 3	·02664			
6. 38	49. 0	9. 16	·1270	23. 28	·02645			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

April 29. The Horizontal Force Magnet was found in contact with the copper damper.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 30		Apr. 30		Apr. 30				
h m	° ′ ″	h m		h m		h m	°	°
6. 55	20. 48. 35	9. 47	·1264	23. 45	·02648			
7. 44	51. 0	10. 5	·1268	23. 59	·02635			
8. 40	51. 40	11. 1	·1265					
	(†)	11. 53	·1270					
9. 0	55. 36*	12. 12	·1268					
9. 43	50. 30	12. 49	·1273					
10. 3	46. 45	13. 22	·1272					
10. 27	45. 50	13. 53	·1284					
10. 44	49. 0		(†)					
10. 52	48. 20	15. 46	·1280					
11. 3	49. 10	18. 8	·1280					
11. 47	48. 0	18. 56	·1277					
12. 15	49. 40	19. 47	·1280					
13. 5	50. 10		(†)					
13. 33	53. 0	21. 0	·1271*					
14. 9	48. 55	23. 59	·1249					
15. 2	50. 0							
19. 9	44. 50							
19. 36	45. 40							
19. 54	43. 45							
20. 8	45. 5							
20. 29	44. 45							
20. 57	46. 0							
21. 48	51. 10							
23. 59	59. 50							
May 1		May 1		May 1		May 1		
0. 0	20. 59. 50	0. 0	·1249	0. 0	·02635	0. 0	60·8	61·2
0. 14	58. 15	0. 17	·1257	1. 1	·02523	1. 0	62·8	63·5
0. 59	58. 15	0. 37	·1248	1. 55	·02490	2. 0	64·5	64·8
1. 27	56. 30	0. 47	·1253	2. 29	·02418	3. 0	66·4	66·0
2. 12	55. 10	1. 2	·1246	5. 7	·01872	9. 0	69·0	69·0
4. 12	53. 50	1. 52	·1248	5. 57	·01761	21. 0	58·8	60·0
4. 41	54. 10	2. 7	·1242	6. 1	·01774			
5. 59	53. 40	2. 25	·1249	7. 2	·01768			
	(†)	2. 55	·1244	7. 52	·01793			
9. 0	50. 45*	3. 10	·1245	9. 30	·01800			
18. 8	20. 52. 10	4. 36	·1240	9. 44	·01782			
21. 0	21. 1. 20	4. 49	·1240	12. 46	·01945			
	(†)	5. 7	·1230	16. 29	·02457			
22. 8	21. 1. 5	5. 22	·1238		·02506			
23. 14	20. 59. 50	5. 36	·1235	18. 15	·02708			
23. 20	21. 0. 15	6. 9	·1236		·02683			
	(†)	6. 28	·1241	21. 0	·02633			
		7. 15	·1239		·02520			
		7. 35	·1256	23. 59	·02530			
		7. 46	·1244					
		8. 5	·1238					
		8. 11	·1240					
		8. 17	·1240					
		8. 47	·1240					
		9. 41	·1245					
		10. 45	·1245					
		11. 41	·1249					
		12. 41	·1251					
		13. 35	·1248					
		14. 8	·1254					
		14. 38	·1253					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		May 1						
h m	° ′ ″	h m		h m		h m	°	°
		15. 23	·1265					
		16. 47	·1255					
		17. 5	·1252					
		17. 38	·1253					
		18. 34	·1250					
		19. 14	·1248					
		19. 38	·1245					
		20. 7	·1243					
		20. 21	·1246					
		21. 31	·1248					
			(†)					
May 2		May 2		May 2		May 2		
	(†)		(†)	0. 0	·02530	1. 0	60·6	61·4
0. 3	20. 56. 40	1. 0	·1251*	0. 37	·02538	3. 0	61·8	63·0
0. 45	57. 50	1. 22	·1251	1. 44	·02372	9. 0	61·5	62·0
0. 59	57. 20	2. 56	·1250	7. 45	·01926	21. 0	51·3	52·9
1. 7	57. 50	3. 7	·1253	10. 17	·02080			
5. 0	51. 50	3. 17	·1249	13. 29	·02372			
5. 14	52. 0	3. 23	·1250	14. 49	·02500			
6. 44	50. 50	3. 34	·1249	16. 3	·02478			
7. 38	51. 45	3. 46	·1252	21. 2	·02386			
8. 44	50. 10	4. 23	·1248		·02314			
10. 49	51. 5	4. 48	·1252	23. 59	·02270			
	(†)	5. 9	·1250					
17. 47	50. 45	5. 25	·1257					
20. 58	49. 50	5. 57	·1252					
21. 57	52. 0	6. 24	·1254					
22. 2	53. 0	7. 38	·1252					
23. 43	58. 40	8. 25	·1255					
23. 59	59. 20	9. 9	·1255					
		9. 17	·1253					
		9. 38	·1254					
		10. 11	·1252					
		10. 34	·1256					
		12. 35	·1260					
		14. 11	·1258					
		14. 37	·1257					
		15. 9	·1264					
		15. 54	·1265					
		17. 41	·1287					
		18. 34	·1268					
			(†)					
		21. 0	·1261*					
		May 3		May 3		May 3		
			(†)	0. 0	·02270	1. 0	52·7	53·9
		1. 0	·1263*	2. 0	·02253	3. 0	53·7	54·8
		1. 22	·1267	5. 24	·02182	9. 0	54·7	55·8
		1. 42	·1271	10. 1	·02160	21. 35	55·0	55·7
		4. 53	·1276	12. 15	·02177			
		5. 21	·1274	12. 20	·02148			
		5. 54	·1277	13. 57	·02179			
		7. 19	·1274	14. 7	·02155			
		8. 35	·1273	15. 17	·02180			
		9. 24	·1276	15. 36	·02166			
		9. 53	·1274	16. 46	·02172			
		10. 15	·1275	17. 4	·02161			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 30d. 2h. The Horizontal Force Magnet was readjusted, and its final position was about 0·0300 different from that preceding. To connect the preceding and following series of records it will be necessary to increase the numbers in the series ending April 28 by 0·03, or to diminish those in the series beginning this day by 0·03.

May 3 and 4. The suspension skein of the Declination Magnet gave way; it was restored on May 5.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 3 h m		May 3 h m		h m	°	°
		10. 57	·1272	18. 1	·02170			
		11. 24	·1280	18. 30	·02152			
		12. 7	·1276	20. 27	·02140			
		12. 23	·1277	23. 0	·02022			
		13. 7	·1272	23. 59	·01937			
		13. 34	·1276					
		13. 56	·1273					
		14. 41	·1272					
		15. 4	·1275					
		15. 28	·1272					
		16. 20	·1277					
		17. 1	·1274					
		17. 31	·1279					
		17. 57	·1280					
		18. 43	·1274					
		19. 22	·1270					
		19. 38	·1265					
		20. 37	·1260					
		20. 49	·1261					
		21. 21	·1258					
		22. 44	·1255					
		23. 13	·1251					
		23. 35	·1252					
		23. 59	·1249					
		May 4		May 4		May 4		
		0. 0	·1249	0. 0	·01937	9. 42	54·8	64·8
		0. 48	·1250	1. 18	·01754	21. 0	60·8	61·2
		1. 34	·1259	4. 54	·01313			
		2. 10	·1259	5. 9	·01345			
		2. 33	·1263	8. 9	·01480			
		3. 13	·1260	10. 5	·01520			
		3. 32	·1263	12. 29	·01500			
		3. 37	·1262	13. 55	·01554			
		4. 18	·1274	16. 52	·01618			
		4. 36	·1271		(†)			
		4. 42	·1271	21. 0	·01751			
		4. 57	·1268	22. 30	·01717			
		5. 10	·1271	23. 59	·01666			
		5. 32	·1268					
		5. 53	·1266					
		7. 3	·1266					
		7. 20	·1264					
		7. 37	·1268					
		8. 0	·1262					
		8. 34	·1266					
		9. 2	·1263					
		9. 22	·1266					
		9. 34	·1263					
		10. 52	·1269					
		11. 31	·1269					
		11. 49	·1285					
		12. 4	·1278					
		13. 14	·1266					
		14. 20	·1269					
		14. 33	·1269					
		14. 50	·1271					
		15. 30	·1268					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 4 h m		h m		h m	°	°
		15. 56	·1272					
		17. 6	·1272					
		17. 23	·1274					
		19. 45	·1269					
			(†)					
		23. 59	·1246					
		May 5		May 5		May 5		
		0. 0	·1246	0. 0	·01666	1. 0	65·8	66·0
	(†)	0. 4	·1245	1. 53	·01448	3. 0	68·8	69·0
1. 0	20. 52. 46*	0. 28	·1238		·01503	9. 0	69·5	72·0
1. 28	54. 35	0. 38	·1241	3. 46	·01614	21. 0	62·7	63·8
1. 57	52. 45	0. 55	·1241	5. 15	·01632			
2. 7	53. 40	1. 12	·1250	5. 26	·01660			
2. 32	53. 50	1. 45	·1240	5. 34	·01648			
3. 6	52. 10	2. 3	·1249	5. 59	·01641			
3. 18	53. 15	2. 13	·1245	6. 10	·01673			
3. 33	51. 10	2. 32	·1248	6. 27	·01646			
4. 37	51. 50	3. 7	·1242	6. 33	·01660			
5. 2	51. 0	3. 16	·1251	6. 50	·01638			
5. 19	51. 40	3. 30	·1240	6. 58	·01665			
5. 36	51. 10	3. 41	·1241	7. 15	·01638			
5. 45	51. 30	4. 25	·1250	7. 45	·01642			
7. 44	50. 10	4. 35	·1252	8. 4	·01617			
8. 29	51. 30	4. 48	·1248	10. 14	·01646			
9. 14	49. 50	4. 55	·1250	12. 11	·01738			
10. 45	49. 50	5. 0	·1242	14. 33	·02016			
	(†)	5. 15	·1249	15. 50	·02132			
16. 0	44. 40	5. 29	·1246	18. 12:	·02458			
16. 30	46. 30	6. 4	·1255	20. 40	·02643			
16. 49	46. 45	6. 17	·1251	20. 47	·02620			
17. 9	47. 35	6. 37	·1250	21. 47	·02603			
18. 9	48. 0	6. 54	·1246	23. 59	·02336			
18. 23	47. 15	7. 33	·1246					
18. 36	48. 15	7. 40	·1260					
18. 58	48. 50	8. 7	·1242					
19. 2	47. 45	8. 22	·1245					
19. 30	47. 35	8. 31	·1245					
19. 45	46. 15	8. 47	·1250					
21. 5	49. 15	8. 59	·1246					
21. 29	50. 55	9. 19	·1247					
21. 40	50. 50	9. 30	·1240					
22. 8	52. 50	9. 41	·1248					
22. 44	53. 45	9. 56	·1242					
23. 19	55. 35	10. 5	·1248					
23. 47	58. 25	10. 21	·1241					
23. 59	58. 5	11. 2	·1247					
		11. 21	·1259					
		11. 38	·1252					
		12. 1	·1264					
		13. 8	·1244					
		13. 48	·1255					
		14. 2	·1254					
		14. 23:	·1261					
		14. 49	·1255					
		15. 24	·1263					
		15. 49	·1262					
		16. 17	·1257					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 6	
0. 0	20. 57. 55
0. 31	59. 0
0. 44	57. 50
0. 48	58. 40
1. 25	51. 0
2. 45	57. 55
2. 57	57. 0
3. 15	56. 15
3. 26	57. 55
3. 44:	55. 0
3. 59	56. 0
4. 15	54. 30
4. 55	53. 20
5. 8	51. 30
5. 35	52. 50
6. 13	48. 30
6. 26	47. 45
6. 45	43. 40
6. 59	43. 10
7. 30	50. 40
7. 45	49. 50
8. 7	50. 0
8. 59	46. 55
9. 21	48. 30
9. 58	38. 0
10. 20	43. 30
11. 40	50. 30
12. 8	50. 50
	(†)
14. 28	45. 0
14. 47	44. 20
15. 15	44. 50
15. 43	43. 10
15. 47	43. 0
16. 15	45. 10
16. 21	44. 45
16. 45	48. 20
17. 14	44. 45
17. 47	49. 25
17. 57	49. 0
18. 38	52. 0
18. 57	51. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 5	
h m	
17. 5	·1252
17. 18	·1253
17. 52	·1249
19. 37	·1242
19. 55	·1246
20. 21	·1246
20. 45	·1242
21. 32	·1241
21. 55	·1236
22. 25	·1231
22. 36	·1233
23. 0	·1226
23. 28	·1228
	(†)
May 6	
1. 0	·1230*
3. 0	·1104*
9. 0	·1114*
21. 0	·1090*

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 6	
0. 0	·02336
2. 30	·01925
3. 53	·01594
4. 5	·01575
7. 1	·01694
7. 42	·01680
9. 34	·01698
9. 48	·01741
10. 31	·01752
12. 11	·01838
14. 3	·01986
14. 32	·02020
17. 50	·02461
17. 57	·02425
19. 23	·02424
	·02358
21. 29	·02410
23. 52	·02375
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 6		
1. 0	68·9	70·0
3. 0	72·2	73·0
9. 0	73·0	73·5
21. 0	64·8	65·1
22. 0	65·1	66·0
23. 0	66·0	66·6

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 6	
19. 8	20. 53. 15
19. 28	50. 10
19. 30	51. 0
19. 46	50. 30
19. 48	52. 10
20. 5	52. 10
20. 27:	55. 20
21. 0	52. 5
22. 3	54. 0
22. 18	56. 10
22. 33	55. 0
23. 0	56. 55
23. 23	56. 5
23. 56	59. 0
	(†)
May 7	
1. 0	20. 56. 5*
3. 0	54. 54*
9. 0	53. 49*
21. 0	51. 24*
May 8	
1. 0	20. 52. 17*
3. 0	49. 19*
9. 0	47. 50*
21. 0	44. 46*
May 9	
1. 0	20. 55. 0*
3. 0	53. 24

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
May 7	
1. 0	·1089*
3. 0	·1119*
9. 0	·1129*
21. 0	·1106*
May 8	
	(†)
1. 0	·1112
3. 7	·1116
4. 32	·1115
4. 59	·1117
8. 38	·1118
9. 11	·1123
9. 47	·1118
10. 25	·1124
11. 0	·1122
11. 21:	·1133
11. 58	·1120
12. 21	·1122
12. 47:	·1124
13. 15	·1117
14. 5	·1124
14. 51	·1123
15. 26	·1124
16. 1	·1123
18. 26	·1120
19. 29	·1120
21. 25	·1118
23. 40	·1116
	(†)
May 9	
1. 0	·1110*
3. 0	·1127

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 7	
1. 0	·02272*
3. 0	·02315*
9. 0	·02497*
21. 0	·02196*
May 8	
	(†)
1. 0	·02027*
2. 58	·01842
7. 38:	·01530
11. 17	·01588
11. 46	·01586
15. 55	·01816
20. 20	·02125
21. 40	·02148
	·02099
22. 41	·02102
22. 49	·02075
23. 39	·02062
	(†)
May 9	
	(†)
0. 26	·02032

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 7		
0. 0	66·6	67·0
1. 0	67·8	68·0
2. 0	67·3	67·6
3. 0	67·3	67·4
6. 0	66·3	66·6
9. 0	64·8	65·0
12. 0	64·5	64·6
18. 0	52·0	53·0
21. 0	57·9	57·5
22. 0	58·8	57·9
23. 0	58·9	57·9
May 8		
0. 0	60·0	58·8
1. 0	61·0	59·9
2. 0	61·9	61·0
3. 0	62·7	62·0
9. 0	62·2	62·0
21. 0	56·8	58·0
May 9		
1. 0	59·0	59·3
3. 0	61·0	60·9

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

May 6. Between the hours of 1 and 3 an unexplained change took place in the position of the Horizontal Force Magnet to the amount of about 0·012. To connect the series ending May 6d. 1h. with that beginning May 6d. 3h. it is necessary to apply 0·012 subtractively to the numbers of the former, or additively to those of the latter.

May 6. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

May 7. The Photographic Traces for the three Magnetometers were too faint for use.

May 8. The Photographic Trace for the Declination Magnet was too faint for use.

May 9. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 9		May 9		May 9		May 9		
h m	° ′ ″	h m		h m		h m	°	°
9. 0	20. 45. 4	9. 0	·1133*	1. 37	·01994	9. 0	61 ·0	61 ·1
21. 0	45. 50*	21. 0	·1114	5. 37	·01773	21. 0	55 ·2	55 ·0
				8. 8	·01692			
				11. 27	·01783			
					(†)			
				21. 0	·02153*			
				22. 58	·02013			
				23. 59	·01980			
May 10		May 10		May 10		May 10		
	(†)		(†)	0. 0	·01980	1. 0	58 ·3	58 ·1
0. 28	20. 54. 40	0. 45	·1129	2. 0	·01841	3. 0	60 ·6	61 ·0
1. 48	54. 45	1. 40	·1129	2. 45	·01720	9. 0	62 ·0	62 ·0
1. 59	56. 10	2. 19	·1157	4. 54	·01482	21. 0	55 ·5	56 ·5
2. 5	55. 0	2. 38	·1136	6. 27	·01404			
2. 15	56. 10	2. 45	·1136	9. 9:	·01217			
3. 4	51. 20	2. 58	·1130	11. 38	·01272			
4. 25	49. 40	3. 21	·1141		(†)			
4. 50	49. 20	3. 36	·1141	21. 0	·02023*			
5. 15	50. 0	3. 45	·1144					
7. 22	44. 0	4. 3	·1143					
7. 34	45. 30	4. 15	·1149					
7. 43	45. 20	4. 27	·1149					
7. 45	46. 10	4. 38	·1153					
7. 58	45. 10	4. 47	·1152					
9. 0	47. 0	5. 4	·1161					
9. 26	45. 50	6. 3	·1127					
10. 0	45. 50	6. 10	·1130					
	(†)	6. 30	·1121					
21. 0	45. 16*	6. 45	·1110					
		6. 53	·1114					
		7. 1	·1110					
		7. 15	·1118					
		8. 4	·1126					
		8. 16	·1130					
		8. 58	·1128					
		9. 7	·1028					
		10. 4	·1136					
		10. 16	·1134					
		10. 27	·1136					
		11 15	·1136					
		11. 27	·1135					
		12. 5	·1136					
			(†)					
		21. 0	·1119*					
May 11		May 11		May 11		May 11		
10. 0	20. 46. 42*	10. 0	·1136*	10. 0	·02134*	10. 0	55 ·0	56 ·0
21. 0	44. 20*	21. 0	·1121*	21. 0	·02158*	21. 0	52 ·8	52 ·0
23. 53	(†)							
23. 59	51. 0							
	51. 0							
May 12		May 12		May 12		May 12		
0. 0	20. 51. 0	0. 0	·1119		(†)	1. 0	55 ·2	55 ·4
0. 6	50. 50	0. 28	·1117	1. 0	·01928*	3. 0	56 ·8	57 ·0
0. 18	51. 45	1. 1	·1123	1. 7	·01878	9. 0	58 ·0	58 ·5
0. 28	51. 40	1. 23	·1119	4. 45	·01620	21. 0	52 ·0	51 ·8

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 12		May 12		May 12				
h m	° ′ ″	h m		h m		h m	°	°
0. 32	20. 52. 50	1. 45	·1130	4. 53	·01608			
1. 7	51. 30	2. 7	·1129	8. 35	·01394			
1. 37	52. 10	2. 31	·1136		(†)			
2. 15	50. 45	2. 38	·1134	9. 0	·01390*			
2. 28	51. 20	2. 49	·1136	21. 0	·02015*			
2. 36	50. 40	3. 7	·1130	21. 44	·01940			
2. 59	50. 55	3. 51	·1142	23. 59	·01877			
3. 45	49. 0	4. 37	·1140					
4. 14	49. 0	4. 47	·1142					
4. 40	47. 45	5. 13	·1161					
5. 3	44. 45	5. 49	·1147					
5. 38	45. 0	6. 17	·1142					
7. 0	44. 35	6. 47	·1142					
8. 0	44. 55	7. 24	·1132					
	(†)	8. 3	·1135					
9. 0	42. 23*		(†)					
21. 0	41. 40*	9. 0	·1132*					
21. 48	44. 50	21. 0	·1119					
22. 6	45. 10	22. 53	·1119					
22. 18	47. 10	23. 59	·1132					
22. 30	47. 30							
22. 44	48. 45							
22. 56	48. 10							
23. 59	53. 30							
May 13		May 13		May 13		May 13		
0. 0	20. 53. 40	0. 0	·1132	0. 0	·01877	1. 0	54 ·0	54 ·4
0. 33	54. 55	0. 47	·1137	0. 47	·01863	3. 0	55 ·9	56 ·8
0. 37	54. 35	1. 41	·1133	2. 31	·01772	9. 0	57 ·6	59 ·3
1. 18	54. 55	1. 56	·1126	5. 0	·01510	21. 0	50 ·5	51 ·5
5. 8	46. 30	2. 21	·1135	5. 16	·01451	22. 0	51 ·0	52 ·2
7. 29	44. 45	2. 32	·1134	10. 18:	·01110	23. 0	51 ·8	52 ·7
8. 17	45. 10	2. 50	·1141	14. 19	·01372			
8. 55	46. 0	3. 11	·1134	19. 18	·02073			
	(†)	3. 20	·1135		·02037			
9. 0	42. 51*	3. 42	·1128	20. 49	·02141			
18. 29	37. 25	4. 3	·1136	23. 59	·01946			
19. 0	36. 15	5. 0	·1138					
19. 16	37. 40	5. 26	·1135					
19. 49	36. 15	6. 25	·1133					
20. 19	36. 45	7. 8	·1135					
20. 23	41. 15	7. 41	·1141					
20. 32	41. 0	8. 2	·1142					
20. 44	38. 35	8. 37	·1136					
20. 57	41. 35	9. 47	·1136					
21. 33	39. 45	10. 8	·1137					
21. 36	40. 40	10. 24	·1139					
21. 42	40. 0	14. 14	·1143					
21. 44	46. 30	14. 32	·1148					
22. 0	40. 30	15. 52	·1140					
22. 10	42. 30	16. 9	·1141					
22. 47	44. 15		(†)					
	(†)	18. 29	·1147					
		21. 21	·1134					
		22. 24	·1129					
		23. 59	·1136					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the readings will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 11. The Photographic Traces for the three Magnetometers were lost, owing to a failure in the supply of gas.

Greenwich Mean Solar Time.	Western Declination.
May 14 h m	° ′ (†)″
0. 23	20. 57. 50
0. 36	58. 15
1. 7	57. 20
1. 32	57. 25
	(†)
2. 7	53. 30
2. 32	54. 0
	(†)
3. 0	50. 4*
5. 0	52. 35
5. 34	50. 40
5. 41	50. 40
6. 43	48. 35
7. 38	48. 5
7. 52	48. 35
8. 8	48. 20
8. 51	44. 20
9. 12	41. 25
9. 30	45. 50
10. 0	49. 20
10. 8	48. 40
10. 46	28. 50
	(†)
21. 0	48. 4*

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 14 h m	(†)
0. 0	·1136
0. 10	·1115
0. 28	·1135
0. 54	·1135
1. 8	·1141
1. 28	·1139
2. 17	·1135
2. 33	·1137
2. 43	·1136
3. 7	·1138
5. 14	·1133
5. 42	·1141
6. 18	·1139
7. 0	·1146
7. 29	·1139
7. 52	·1145
8. 9	·1140
8. 30	·1140
	(†)
9. 0	·1171*
9. 47	·1164
9. 53	·1157
9. 58	·1160
10. 4	·1156
10. 8	·1160
10. 17	·1152
10. 22	·1152
11. 1	·1091
11. 8	·1107
	***
11. 28	·1106
11. 32	·1110
11. 35	·1099
11. 45	·1118
11. 47	·1114
11. 50	·1122
11. 53	·1112
12. 3	·1128
12. 14	·1134
12. 22	·1130
12. 29	·1134
12. 56	·1126
13. 8	·1131
13. 54	·1132
14. 9	·1134
14. 52	·1131
15. 0	·1136
15. 7	·1134
18. 32	·1136
	***
20. 29	·1136
21. 15	·1133
21. 39	·1134
21. 49	·1129
22. 4	·1131
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 14 h m	
0. 0	·01946
0. 23	·01927
	(†)
1. 0	·02011*
3. 0	·01295*
9. 0	·01113*
21. 0	·01264*

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 14 h m	°	°
0. 0	52 ·7	53 ·4
1. 0	53 ·1	54 ·0
3. 0	54 ·2	55 ·0
6. 0	55 ·2	56 ·3
9. 0	54 ·5	56 ·0
12. 0	53 ·6	55 ·4
21. 0	49 ·6	51 ·1
22. 0	50 ·0	51 ·0
23. 0	50 ·2	50 ·8

Greenwich Mean Solar Time.	Western Declination.
May 15 h m	° ′ (†)″
1. 0	20. 55. 0
1. 32	55. 45
1. 39	54. 45
2. 6	55. 45
2. 44	54. 50
2. 52	55. 10
	***
7. 29	47. 5
7. 49	48. 35
7. 59	48. 5
8. 15	48. 30
8. 41	48. 0
9. 16	49. 15
9. 36	48. 20
10. 25	48. 10
11. 0	49. 0
	(†)
18. 29	48. 20
19. 3	44. 25
19. 18	45. 20
19. 39	44. 10
19. 53	44. 35
20. 4	46. 0
20. 30	48. 5
20. 59	48. 10
21. 14	50. 20
21. 44	48. 20
22. 23	50. 50
22. 54	50. 50
23. 4	50. 10
23. 17	50. 20
23. 40	49. 40
23. 56	49. 50
23. 59	49. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 15 h m	(†)
1. 0	·1120*
1. 50	·1122
2. 2	·1134
2. 11	·1127
2. 17	·1128
	***
2. 23	·1125
2. 30	·1132
2. 41	·1129
2. 51	·1135
2. 56	·1133
3. 9	·1127
3. 25	·1130
3. 35	·1135
3. 46	·1132
3. 58	·1137
4. 7	·1134
4. 14	·1137
4. 23	·1133
4. 34	·1140
4. 41	·1135
	***
5. 0	·1140
5. 34	·1136
6. 0	·1138
6. 11	·1136
6. 28	·1138
6. 36	·1135
6. 45	·1142
6. 59	·1135
7. 7	·1144
7. 17	·1140
7. 30	·1156
7. 47	·1136
7. 53	·1143
8. 22	·1132
8. 40	·1136
8. 52	·1134
	***
9. 38	·1135
9. 47	·1137
10. 13	·1131
10. 37	·1157
10. 42	·1150
10. 47	·1152
11. 3	·1136
11. 12	·1150
11. 22	·1126
11. 33	·1140
11. 53	·1125
12. 7	·1149
12. 15	·1138
12. 25	·1141
12. 32	·1121
12. 39	·1126
12. 52	·1125
13. 8	·1127

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 15 h m	(†)
0. 38	·01256
2. 7	·01275
5. 25	·01133
	·01480
8. 1	·01400
11. 1	·01368
11. 21	·01338
12. 53	·01325
15. 17	·01367
16. 46	·01374
17. 32	·01353
18. 22	·01342
	·01394
20. 0	·01430
20. 44	·01419
20. 49	·01397
23. 59	·01381

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 15 h m	°	°
0. 0	50 ·4	51 ·3
1. 0	51 ·0	51 ·9
2. 0	51 ·5	52 ·4
3. 0	52 ·0	53 ·2
9. 0	54 ·0	55 ·3
21. 0	54 ·0	55 ·2

For the Horizontal and Vertical Forces, increasing Readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 16	
0. 0	20. 49. 25
0. 37	51. 0
0. 45	51. 0
0. 57	51. 10
1. 0	52. 25
1. 25	53. 40
1. 53	52. 0
1. 58	55. 45
2. 0	53. 20
2. 24	52. 40
2. 27	55. 0
	***
2. 45	48. 30
	***
3. 4	56. 0
3. 8	54. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 15	
h m	
13. 35	·1139
13. 38	·1130
13. 45	·1136
13. 51	·1132
13. 58	·1134
14. 7	·1139
14. 10	·1133
14. 16	·1137
14. 25	·1129
	***
14. 48	·1128
14. 55	·1132
15. 22	·1130
16. 28	·1134
16. 42	·1130
17. 10	·1143
17. 45	·1138
18. 4	·1142
18. 25	·1136
	(†)
19. 34	·1110
19. 53	·1108
20. 19	·1088
20. 30	·1089
20. 44	·1103
20. 58	·1100
21. 13	·1101
21. 59	·1113
22. 2	·1122
22. 9	·1110
22. 22	·1115
	***
22. 58	·1110
23. 4	·1124
	***
23. 16	·1114
23. 30	·1123
23. 37	·1116
23. 59	·1124
May 16	
0. 0	·1124
1. 37	·1116
1. 59	·1116
2. 28	·1129
2. 37	·1123
3. 17	·1133
3. 38	·1124
3. 45	·1126
3. 53	·1122
4. 32	·1135
4. 53	·1133
5. 17	·1145
5. 32	·1147
5. 51	·1133
6. 9	·1135
6. 30	·1133

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 16	
0. 0	·01381
2. 24	·01258
	·01557
3. 11	·01592
	·01850
4. 47	·01577
5. 23	·01482
	·01620
6. 36	·01476
7. 13	·01442
8. 4	·01487
	·01590
9. 17	·01634
11. 56:	·01603
14. 22	·01737
14. 30	·01738

Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
h m	°	°
May 16		
1. 0	57 ·2	58 ·0
3. 0	59 ·6	60 ·7
9. 0	62 ·0	63 ·0
21. 0	55 ·4	56 ·3

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 16	
3. 19	20. 54. 10
3. 25	54. 50
4. 37	52. 0
5. 4	52. 20
6. 30	50. 35
7. 33	50. 0
7. 45	50. 35
8. 12	50. 0
8. 30	47. 45
9. 30	51. 40
10. 27	50. 50
10. 43	48. 30
11. 3	48. 20
11. 27	48. 55
12. 2	50. 10
12. 12	49. 40
12. 34	49. 25
12. 42	51. 0
12. 56	49. 35
13. 3	51. 0
14. 8	51. 30
14. 29	54. 15
14. 53	50. 10
15. 7	48. 40
15. 15	49. 15
16. 8	49. 20
16. 25:	50. 15
16. 41	48. 50
17. 3	48. 15
17. 30	49. 15
18. 22	47. 50
18. 30	44. 0
18. 40	46. 10
18. 46	45. 30
18. 56	41. 30
19. 5	45. 20
19. 33	45. 10
19. 40	45. 45
19. 45	44. 40
19. 56	45. 20
20. 0	44. 25
20. 12	45. 0
20. 50	44. 25
21. 45	46. 45
22. 24	49. 50
22. 45	50. 0
23. 8	55. 0
23. 15	48. 10
23. 33	49. 10
	(†)
May 17	
	(†)
0. 4	20. 56. 25
0. 25	56. 45
0. 40	57. 40
0. 50	56. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 16	
6. 44	·1141
6. 59	·1131
7. 25	·1137
7. 38	·1129
7. 47	·1132
8. 2	·1131
8. 8	·1133
9. 3	·1127
9. 37	·1132
10. 8	·1125
10. 20	·1127
10. 35	·1124
10. 57	·1136
11. 37	·1128
11. 54	·1132
12. 7	·1130
12. 20	·1134
12. 34	·1128
12. 45	·1134
12. 55	·1128
13. 5	·1131
14. 7	·1132
14. 34	·1148
14. 58	·1135
	***
15. 40	·1126
	***
16. 4	·1130
16. 12	·1129
	***
16. 50	·1135
17. 8	·1133
17. 35	·1133
17. 47	·1129
18. 17	·1130
18. 23	·1133
18. 41	·1117
18. 55	·1135
19. 32	·1125
	***
20. 13	·1124
	***
21. 47	·1118
	***
22. 23	·1123
22. 37	·1117
22. 55	·1117
23. 16	·1124
23. 35	·1121
23. 59	·1122
May 17	
0. 0	·1122
0. 14	·1128
0. 32	·1127
0. 51	·1133
1. 16	·1121

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 16	
18. 14	·02126
	·02198
21. 14	·02311
19. 32	·02314
	·01975
20. 42	·01986
	·01793
22. 46	·01853
	·01640
23. 30	·01610
	(†)
May 17	
	(†)
1. 0	·01450*
1. 53	·01662
3. 9	·01513
	·01725

Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
h m	°	°
May 17		
1. 0	60 ·0	61 ·0
3. 0	62 ·2	63 ·0
9. 0	63 ·0	64 ·0
21. 45	57 ·5	58 ·7

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Greenwich Mean Solar Time.	Western Declination.
May 17 h m	° ′ ″
1. 32	20. 56. 55
1. 41	56. 0
1. 58	56. 15
2. 4	57. 15
2. 14	57. 0
2. 15	57. 45
2. 23	57. 5
2. 28	57. 30
2. 40	56. 30
3. 30	56. 10
3. 54	55. 0
3. 58	55. 35
4. 25	54. 15
4. 35	54. 55
5. 4	54. 5
5. 14	54. 15
5. 27	53. 55
5. 33	53. 55
5. 54	52. 10
6. 4	52. 10
6. 22	49. 50
7. 29	51. 10
8. 47	50. 50
9. 2	46. 45
9. 15	47. 0
9. 22	45. 40
9. 49	49. 10
10. 8	48. 35
10. 24	44. 30
10. 37	46. 40
10. 48	46. 20
10. 59	48. 20
11. 7	48. 0
11. 17	48. 35
11. 27	50. 30
11. 35	51. 0
11. 47	49. 10
12. 23	48. 45
12. 49	50. 0
12. 59	51. 45
13. 20	51. 10
13. 45	52. 10
14. 24	48. 45
14. 38	48. 30
14. 51	47. 40
15. 19	48. 0
	(†)
16. 28	47. 0
16. 35	48. 10
16. 45	48. 15
17. 0	47. 20
17. 13	47. 50
	(†)
18. 51	50. 35
19. 6	58. 35
19. 20	50. 45
20. 45	50. 50
20. 58	51. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 17 h m	
1. 31	·1123
1. 45	·1123
2. 39	·1124
2. 53	·1126
3. 4	·1123
4. 6	·1138
4. 17	·1134
4. 23	·1139
5. 1	·1134
5. 28	·1136
5. 53	·1132
6. 21	·1142
6. 39	·1139
6. 52	·1140
7. 12	·1134
7. 30	·1133
7. 40	·1138
8. 10	·1134
8. 37	·1139
8. 51	·1145
9. 5	·1136
9. 30	·1137
9. 47	·1137
10. 17	·1132
10. 36	·1142
10. 49	·1139
10. 55	·1141
11. 4	·1134
11. 15	·1135
11. 24	·1132
11. 34	·1137
11. 47	·1135
12. 9	·1138
12. 41	·1135
13. 1	·1138
13. 6	·1138
13. 19	·1142
13. 39	·1141
13. 47	·1136
14. 20	·1146
14. 28	·1145
14. 36	·1145
14. 45	·1142
14. 48	·1145
15. 0	·1140
15. 6	·1143
15. 16	·1138
15. 29	·1140
16. 16	·1138
16. 35	·1143
16. 40	·1137
16. 45	·1143
16. 51	·1138
16. 55	·1145
17. 0	·1139
17. 15	·1146
18. 2	·1136
18. 37	·1136

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 17 h m	
5. 37	·01452
6. 13	·01447
8. 20	·01490
11. 14	·01442
16. 1	·01743
21. 14	·02275
22. 15	·02369
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
May 17 h m	° ′ ″
21. 32	20. 54. 35
	(†)
21. 45	52. 20*
May 18	
8. 30	20. 54. 13*
21. 0	49. 36*
May 19	
	(†)
0. 26	21. 3. 30
0. 37	3. 10
0. 57	0. 0
1. 14	21. 0. 30
1. 15	20. 55. 10
1. 46	55. 0
2. 34	53. 20
2. 45	53. 45
3. 17	53. 0
3. 39	54. 10
4. 7	47. 55
5. 0	50. 0
5. 9	51. 30
5. 34	50. 50
5. 44	52. 0
5. 57	50. 35
6. 22	51. 40
7. 48	50. 30
8. 0	57. 40
8. 16	46. 55
8. 41	44. 0
8. 58	43. 35
9. 3	43. 10
9. 13	46. 0
9. 29	44. 15
9. 35	45. 10
9. 43	38. 30
9. 53	40. 10
10. 2	36. 30
10. 14	43. 40
10. 28	30. 50
10. 42	42. 10
10. 57	35. 45
11. 13	42. 0
11. 23	41. 20
11. 33	43. 50
11. 45	42. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 17 h m	
19. 5	·1132
19. 15	·1133
19. 46	·1130
20. 2	·1133
20. 53	·1123
22. 6	·1122
	(†)
May 18	
8. 30	·1131*
21. 0	·1121*
May 19	
	(†)
1. 0	·1123
1. 15	·1125
1. 34	·1123
1. 41	·1127
1. 54	·1121
1. 55	·1127
2. 2	·1103
2. 15	·1102
	(†)
3. 0	·1132*
3. 2	·1142
3. 22	·1142
3. 37	·1161
3. 52	·1129
4. 0	·1134
4. 7	·1121
4. 22	·1142
5. 0	·1123
5. 8	·1130
5. 45	·1120
5. 53	·1133
6. 10	·1126
	* * *
6. 52	·1120
6. 59	·1125
7. 2	·1116
7. 14	·1122
7. 22	·1115
8. 2	·1122
	(†)
9. 0	·1132*
9. 3	·1124
9. 18	·1088
9. 22	·1098
9. 25	·1096
9. 37	·1130
9. 45	·1127

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 18 h m	
0. 0	·02342
3. 1	·02186
5. 43	·01882
8. 19	·01501
	·01530
12. 38	·01523
14. 22	·01581
	(†)
21. 0	·02194*
May 19	
1. 0	(†)
3. 0	·01564*
4. 19	·01435*
5. 18	·01761
8. 15	·01610
9. 6	·01602
9. 23	·01526
9. 35	·01548
9. 39	·01507
9. 46	·01515
	·01494
	·01560
10. 30	·01452
11. 6	·01561
11. 23	·01570
12. 29	·01698
13. 1	·01680
16. 0	·01983
20. 31	·02384
21. 30	·02395
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 18		
8. 30	65 ·0	66 ·5
21. 0	57 ·9	58 ·2
May 19		
1. 0	63 ·4	64 ·5
3. 0	66 ·2	67 ·0
9. 0	68 ·0	68 ·2
21. 0	60 ·3	61 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

May 18. The traces for the Declination and Horizontal Force Magnets were lost, in consequence of defects in the photographic paper.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 19		May 19						
h m	° ′ ″	h m		h m		h m	°	°
11. 55	20. 43. 45	9. 55	·1092					
12. 14	45. 20	10. 0	·1096					
12. 29	51. 15	10. 8	·1075					
12. 45	46. 55	10. 11	·1098					
13. 4	50. 0	10. 17	·1098					
13. 22	49. 0	10. 34	·1122					
13. 45	49. 30	10. 46	·1083					
14. 44	47. 35	11. 8	·1126					
15. 43	48. 20		***					
16. 0	50. 10	11. 20	·1122					
16. 32	47. 35	12. 2	·1097					
16. 41	48. 25	12. 12	·1102					
16. 46	44. 30	12. 29	·1097					
16. 59	48. 0	12. 37	·1112					
17. 11	44. 0	12. 49	·1112					
17. 23	45. 15	13. 7	·1101					
17. 40	44. 40	13. 40	·1102					
17. 45	46. 0	13. 49	·1095					
	***	13. 52	·1100					
17. 52	42. 50		***					
17. 54	44. 30	14. 25	·1098					
18. 9	38. 50	14. 32	·1102					
18. 12	42. 0	14. 35	·1099					
18. 18	41. 50		***					
18. 21	46. 0	16. 38	·1107					
18. 24	37. 30	16. 44	·1115					
18. 33	43. 10	16. 47	·1102					
18. 42	42. 0	16. 53	·1112					
19. 12	45. 10	17. 2	·1117					
19. 19	43. 10	17. 7	·1112					
19. 37	44. 0	17. 49	·1115					
20. 13	49. 10	17. 54	·1123					
20. 27	47. 0	18. 4	·1114					
20. 30	53. 5	18. 16	·1123					
20. 33	51. 10	18. 23	·1115					
20. 56	49. 0		***					
21. 21	49. 50	18. 49	·1115					
21. 25	50. 40		***					
21. 33	49. 35	19. 37	·1105					
	(†)	20. 0	·1108					
			***					
		20. 25	·1104					
		20. 34	·1117					
		20. 55	·1093					
		21. 28	·1088					
		21. 34	·1078					
			(†)					
May 20		May 20		May 20		May 20		
	(†)		(†)		(†)			
1. 0	20. 57. 27*	1. 0	·1106*	1. 0	·02393*	1. 0	63 ·0	62 ·2
3. 0	56. 10*	3. 0	·1118*	2. 57	·02240	3. 0	63 ·8	63 ·2
3. 41	53. 25	3. 53	·1115	4. 16	·02108	9. 0	64 ·0	65 ·0
5. 21	49. 55	4. 34	·1097	6. 36	·01821	21. 0	54 ·4	55 ·1
5. 30	50. 15	4. 52	·1102		·01920	22. 0	54 ·7	55 ·3
7. 15	48. 25	5. 17	·1099	7. 3	·01837	23. 0	54 ·5	55 ·5
7. 36	47. 0	5. 36	·1111		·01886			
7. 47	47. 45	6. 6	·1107	8. 25	·01834			
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 20		May 20		May 20				
h m	° ′ ″	h m		h m		h m	°	°
8. 6	20. 45. 55	6. 46	·1106	8. 30	·01868			
	***		***	11. 37:	·01870			
9. 2	48. 55	7. 34	·1110	16. 30	·02488			
9. 43	49. 10	7. 43	·1113	18. 39	·02490			
9. 58	50. 30	8. 3	·1112		·02421			
10. 8	49. 30	8. 23	·1115	19. 53	·02422			
10. 38	50. 35	9. 0	1109		·02318			
	***		***	20. 37	·02365			
13. 28	50. 55	11. 20	·1111	20. 59	·02322			
13. 29	50. 10	11. 37	·1114	22. 44	·02314			
15. 14	49. 0	12. 11	·1113		·02260			
15. 34	48. 15		***	23. 59	·02306			
18. 35	47. 0	18. 13	·1122					
18. 39	47. 55		***					
18. 47	46. 0	19. 10	·1121					
18. 53	47. 50		***					
19. 22	47. 20	20. 0	·1114					
19. 30	48. 25		***					
19. 33	48. 0	21. 38	·1112					
20. 33	49. 50	21. 50	·1105					
21. 45	53. 50		***					
22. 10	56. 30	23. 11	·1121					
22. 56	55. 5	23. 59	·1120					
23. 59	58. 20							
May 21		May 21		May 21		May 21		
0. 0	20. 58. 15	0. 0	·1121	0. 0	·02306	0. 0	55 ·8	56 ·0
0. 23	59. 0	0. 17	·1120		(†)	1. 0	55 ·8	56 ·2
0. 37	59. 15	0. 38	·1096	1. 0	·02364*	2. 0	56 ·4	57 ·0
2. 7	56. 15		(†)	1. 51	·02038	3. 0	56 ·6	57 ·0
2. 36	56. 40	1. 0	·1112*	4. 57	·01961	6. 0	58 ·0	58 ·0
2. 37	57. 0	1. 45	·1108	6. 33	·01882	9. 0	56 ·9	57 ·0
2. 45	54. 50		***	9. 57:	·01874	12. 0	54 ·5	54 ·5
2. 54	56. 0	3. 3	·1123	13. 3	·02094	18. 0	51 ·4	52 ·2
3. 7	57. 45		***	13. 7	·02078	21. 0	52 ·7	52 ·0
3. 32	57. 15	3. 59	·1108	14. 59	·02180	22. 0	54 ·0	53 ·2
3. 38	55. 10	4. 9	·1114		·02152	23. 0	55 ·0	54 ·1
3. 45	56. 45		***	15. 51	·02248			
4. 57	50. 50	4. 28	·1111	18. 25	·02287			
5. 23	52. 45	4. 38	·1117		·02241			
5. 45	50. 45	5. 1	·1115	18. 43	·02252			
6. 3	51. 0		***		·02120			
6. 41	49. 0	5. 47	·1129	20. 37	·02128			
9. 36	51. 50		***		·02086			
13. 57	51. 0	6. 31	·1128	21. 48	·02100			
14. 58	48. 30		***	23. 35	·01962			
15. 41	49. 0	6. 58	·1131	23. 59	·01960			
16. 0	53. 0	7. 16	·1128					
16. 18	52. 50	8. 40	·1121					
17. 2	46. 40	9. 38	·1120					
17. 25	47. 10	9. 45	·1126					
18. 34	45. 0	9. 49	·1121					
18. 52	47. 0	10. 0	·1122					
19. 10:	45. 30	10. 43	·1118					
19. 20	47. 5	10. 54	·1122					
19. 30	47. 0	11. 19	·1119					
19. 34	48. 45		***					
19. 40	47. 10	11. 49	·1124					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 21		May 21						
h m	° ′ ″	h m		h m		h m	°	°
20. 3	20. 47. 25	12. 9	·1118					
20. 12	48. 45	12. 19	·1120					
20. 17	47. 5		***					
20. 24	49. 20	12. 56	·1123					
20. 29	48. 50	13. 45	·1118					
20. 48	51. 10	14. 11	·1118					
20. 54	50. 15	14. 47	·1112					
21. 5	51. 10	15. 10	·1116					
	(†)	15. 19	·1116					
23. 38	54. 30	15. 45	·1119					
23. 59	57. 0	16. 26:	·1128					
		17. 0	·1118					
		18. 2	·1121					
		18. 13	·1115					
		18. 21	·1122					
		18. 29	·1112					
		18. 32	·1122					
			***					
		19. 22	·1120					
		20. 10	·1118					
		20. 11	·1111					
		20. 22	·1114					
		20. 39	·1108					
			***					
		21. 7	·1111					
			***					
		21. 40	·1105					
			***					
		21. 56	·1084					
		22. 21	·1099					
		23. 3	·1108					
		23. 13	·1100					
		23. 25	·1101					
		23. 35	·1097					
		23. 43	·1104					
			(†)					
May 22		May 22		May 22		May 22		
0. 0	20. 56. 55	1. 0	·1123*	0. 0	·01960	0. 0	56 ·0	55 ·8
0. 9	55. 0	3. 0	·1121*	0. 58	·01877	1. 0	57 ·1	56 ·8
0. 23	55. 0	9. 0	·1102*	2. 15:	·01760	2. 0	58 ·4	58 ·3
0. 50	55. 0	21. 0	·1106*	3. 45	·01433	3. 0	59 ·7	60 ·0
3. 21	50. 50				·01342	9. 0	62 ·0	62 ·0
4. 46	49. 35			4. 21	·01383	21. 0	56 ·9	56 ·8
	(†)				(†)			
8. 57	50. 5			9. 0	·01450*			
12. 6	50. 40			9. 9	·01447			
16. 13	48. 50			11. 46	·01480			
16. 58	47. 0			14. 22	·01613			
18. 19	46. 15			20. 41	·02038			
18. 37	47. 20			23. 0	·02083			
19. 6	46. 55				(†)			
21. 29	49. 45							
23. 59	55. 10							
May 23		May 23		May 23		May 23		
0. 0	20. 55. 0		(†)		(†)	1. 0	58 ·4	58 ·2
0. 57	55. 10	1. 0	·1105*	0. 23	·02122	3. 0	60 ·1	60 ·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 23		May 23		May 23		May 23		
h m	° ′ ″	h m		h m		h m	°	°
1. 4	20. 56. 5	3. 0	·1100*	1. 32	·02174	9. 0	62 ·3	63 ·2
2. 6	55. 30	5. 24	·1106	2. 2	·02160	21. 0	58 ·1	58 ·8
2. 23	54. 15	6. 13	·1107		(†)			
	(†)	6. 32	·1105	3. 0	·02141*			
3. 0	52. 31*	6. 55	·1114	4. 22	·02015			
4. 8	51. 0	7. 6	·1115	5. 58	·01880			
4. 40	49. 45	7. 15	·1112	7. 49	·01720			
6. 34	50. 0	7. 22	·1115	10. 15	·01605			
9. 28	49. 5	7. 36	·1113	13. 1	·01570			
10. 0	45. 50	8. 3	·1115	14. 3	·01542			
10. 10	45. 50	8. 15	·1114	15. 31	·01674			
10. 19	44. 35	8. 29	·1120	16. 54	·01758			
10. 41	48. 10	8. 37	·1112	19. 40	·01951			
10. 57	49. 30	8. 50	·1118	21. 46	·01996			
12. 17	49. 45	9. 45	·1121	23. 32	·01885			
15. 7	47. 10	10. 2	·1113		(†)			
15. 22	49. 10	10. 7	·1116					
15. 35	48. 10	10. 15	·1109					
16. 3	53. 5	10. 19	·1114					
17. 3	46. 0	10. 22	·1109					
17. 42	47. 45		***					
17. 48	48. 50	10. 30	·1111					
17. 59	47. 25	10. 34	·1114					
18. 24	47. 30		***					
18. 57	51. 0	10. 40	·1115					
19. 3	50. 40	10. 49	·1108					
19. 10	51. 15	11. 0	·1113					
19. 21	50. 45	11. 10	·1107					
19. 45	52. 10	11. 19	·1114					
20. 8	52. 20	11. 22	·1108					
20. 25	53. 30	11. 32	·1096					
20. 45	53. 20	11. 38	·1111					
22. 22	20. 58. 45	11. 44	·1101					
23. 37	21. 0. 30	11. 48	·1109					
23. 59	0. 15	11. 52	·1104					
		12. 20	·1117					
		12. 37	·1110					
		12. 45	·1113					
		12. 53	·1105					
			***					
		13. 2	·1102					
		13. 17	·1114					
		13. 58	·1108					
		14. 18	·1101					
		14. 43	·1102					
		15. 11	·1108					
		15. 34	·1104					
		15. 43	·1106					
		16. 5	·1102					
		16. 32	·1106					
		17. 2	·1097					
		17. 38	·1103					
		18. 2	·1102					
		18. 8	·1103					
		18. 23	·1100					
		18. 53	·1107					
		19. 23	·1102					
		19. 49	·1102					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

May 22. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 23 h m		h m		h m	°	°
		20. 8	·1107					
		20. 35	·1102					
		22. 2	·1101					
		22. 23	·1104					
		22. 32	·1109					
		22. 53	·1095					
		23. 13	·1101					
		23. 59	·1103					
May 24		May 24		May 24		May 24		
0. 0	21. 0. 10	0. 0	·1103		(†)	1. 0	61 ·1	61 ·8
0. 14	21. 0. 5	0. 15	·1098	0. 50	·01822	3. 0	63 ·0	63 ·8
0. 34	20. 59. 10	0. 30	·1104	1. 21	·01800	9. 0	64 ·0	64 ·8
1. 12	59. 35	1. 25	·1096	3. 21	·01524	22. 0	59 ·0	57 ·7
2. 51	53. 50	1. 45	·1092	3. 45	·01586			
5. 2	50. 30	2. 9	·1111	3. 58	·01561			
	***	2. 30	·1103	4. 8	·01577			
7. 42	49. 45	2. 54	·1106	4. 29	·01575			
8. 2	46. 0	3. 11	·1100	4. 33	·01622			
10. 12	52. 0	3. 20	·1104	4. 52	·01572			
10. 50	51. 0	3. 51	·1097	5. 5	·01600			
11. 7	52. 40	4. 10	·1103	5. 32	·01580			
11. 54	50. 45	4. 20	·1098		·01632			
12. 24	51. 10	4. 35	·1098	6. 11	·01582			
13. 40	49. 0	4. 49	·1103	6. 30	·01594			
14. 44	51. 15	5. 7	·1101		·01642			
17. 0	47. 15	5. 26	·1107	7. 23	·01588			
17. 14	48. 15	5. 40	·1105	7. 59	·01609			
17. 57	47. 0	6. 15	·1107		·01662			
	***	6. 42	·1103	9. 44:	·01587			
19. 0	47. 0	7. 4	·1104	11. 34	·01655			
19. 12	47. 40	7. 15	·1108	13. 6	·01762			
19. 53	46. 50	7. 26	·1106	15. 25	·01978			
	***	7. 35	·1106	19. 22	·02530			
20. 33	47. 20	7. 47	·1103	19. 30	·02506			
21. 13	48. 30	7. 53	·1103	22. 20	·02440			
22. 58	56. 5	8. 7	·1110	23. 59	·02372			
	(†)	8. 24	·1105					
		9. 15	·1103					
		9. 32	·1105					
		10. 15	·1106					
		10. 38	·1103					
		10. 53	·1107					
		11. 39	·1105					
		12. 0	·1109					
		12. 15	·1104					
		12. 32	·1108					
		13. 11	·1103					
		13. 45	·1103					
		14. 15	·1099					
		15. 15	·1110					
		15. 32	·1108					
		15. 52	·1109					
			***					
		16. 36	·1107					
		17. 15	·1109					
		18. 23	·1103					
		18. 58	·1097					
		20. 23	·1094					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	May 24 h m		h m		h m	°	°
		20. 53	·1096					
		21. 25	·1092					
		21. 39	·1095					
		21. 52	·1095					
		22. 7	·1093					
		22. 30	·1112					
		22. 53	·1111					
			(†)					
May 25		May 25		May 25		May 25		
9. 0	20. 48. 0*	9. 0	·1106*	0. 0	·02372	9. 0	62 ·4	63 ·0
21. 0	47. 44*	21. 0	·1096*	0. 17	·02356	21. 0	55 ·3	55 ·8
				3. 17	·01925			
				4. 54	·01734			
					·01820			
				6. 40	·01798			
				6. 46	·01820			
				7. 0	·01801			
				7. 11	·01821			
				7. 25	·01799			
				7. 33	·01820			
				7. 48	·01800			
				7. 54	·01825			
				9. 28:	·01788			
				10. 51	·01816			
				13. 53	·02080			
				17. 32	·02542			
					·02494			
				22. 22	·02365			
				23. 59	·02261			
May 26				May 26		May 26		
	(†)		(†)	0. 0	·02261	1. 0	60 ·2	61 ·0
1. 0	20. 54. 19*	1. 0	·1111*	1. 40	·02038	3. 0	63 ·0	63 ·2
1. 17	56. 30	2. 0	·1104	2. 54	·01822	9. 0	64 ·5	65 ·5
1. 33	58. 5	2. 7	·1112	4. 8	·01560	21. 0	59 ·3	60 ·0
2. 3	55. 40	2. 24	·1100	5. 33	·01378			
3. 15	52. 25	2. 52	·1107	7. 0	·01445			
3. 28	52. 15	3. 15	·1102	7. 24	·01432			
4. 24	49. 20	3. 37	·1103	7. 43	·01475			
5. 13	47. 45	3. 47	·1108	8. 32	·01438			
6. 44	46. 10	4. 7	·1107		·01492			
7. 11	47. 0	4. 21	·1097	10. 43	·01478			
7. 32	39. 10	4. 37	·1106	14. 38:	·01700			
7. 50	43. 25		***	19. 53	·02102			
8. 18	45. 45	5. 40	·1107	23. 59	·02245			
9. 3	45. 0	6. 16	·1114					
9. 36	47. 20	6. 46	·1105					
9. 57	47. 5	7. 2	·1109					
10. 19	47. 55	7. 19	·1105					
10. 38	45. 45	7. 20	·1108					
11. 0	48. 45	7. 32	·1100					
11. 23	47. 10	7. 50	·1121					
12. 16	49. 5	8. 20	·1099					
12. 39	48. 15	8. 50	·1098					
13. 34	48. 50	9. 0	·1103					
13. 45	49. 25		***					
14. 43	48. 55	10. 3	·1102					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 25. The traces of the Declination and Horizontal Force were lost on this day.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 26		May 26						
h m	° ′ ″	h m		h m		h m	°	°
15. 9	20. 47. 25	10. 22	·1108					
15. 18	49. 15	10. 53	·1099					
15. 25	49. 10	11. 20	·1102					
15. 48	51. 15	11. 54	·1102					
16. 24	48. 10	12. 6	·1104					
16. 50	47. 40		***					
17. 0	46. 25	13. 41	·1102					
17. 30	46. 10	14. 20	·1105					
17. 39	47. 0	14. 37	·1108					
18. 12	45. 0	15. 21	·1104					
18. 23	46. 0	15. 34	·1107					
19. 7	44. 0	15. 47	·1105					
19. 29	44. 0	16. 7	·1106					
19. 44	46. 30	18. 44	·1093					
20. 25	46. 50	18. 58	·1093					
20. 53	49. 20	19. 8	·1090					
21. 4	49. 20	19. 57	·1091					
21. 57	54. 20	20. 6	·1092					
22. 6	54. 20	20. 20	·1091					
22. 52	56. 50	21. 18	·1096					
23. 15	59. 5	21. 34	·1095					
23. 59	59. 10	21. 58	·1100					
		22. 28	·1094					
		22. 36	·1097					
			***					
		22. 52	·1092					
		23. 4	·1097					
		23. 21	·1098					
		23. 31	·1096					
		23. 59	·1100					
May 27		May 27		May 27		May 27		
0. 0	20. 59. 10	0. 0	·1100	0. 0	·02245	1. 0	60 ·7	61 ·0
0. 15	59. 20	1. 1	·1099	2. 4	·02282	3. 0	61 ·8	62 ·0
	(†)	1. 20	·1098	4. 18	·02214	9. 0	63 ·0	63 ·5
1. 0	53. 55	1. 47	·1102	10. 10:	·01970	21. 0	60 ·0	60 ·8
1. 11	54. 20	2. 15	·1098	13. 15	·02060	22. 0	60 ·4	61 ·2
2. 8	54. 10	2. 25	·1097	19. 53	·02400	23. 0	60 ·8	61 ·4
3. 42	50. 10	2. 43	·1102	22. 18	·02378			
3. 48	50. 25	3. 30	·1095	23. 34	·02350			
4. 13	48. 50	3. 46	·1104		(†)			
5. 13	47. 50	4. 5	·1100					
5. 35	46. 15	5. 2	·1109					
6. 17	45. 30	5. 30	·1103					
8. 32	45. 50	6. 12	·1102					
8. 45	43. 50	6. 26	·1107					
9. 20	44. 55	7. 2	·1102					
9. 50	46. 30	8. 0	·1105					
10. 14	46. 55	8. 36	·1100					
10. 28	46. 0	8. 52	·1103					
13. 29	47. 10	9. 58	·1104					
15. 19	44. 55	10. 21	·1101					
16. 4	44. 55	10. 44	·1103					
17. 7	42. 20	11. 28	·1100					
17. 46	41. 30	15. 8	·1102					
18. 6	42. 50	16. 32	·1104					
18. 36	42. 0	18. 47	·1091					
19. 12	42. 25	19. 47	·1089					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 27		May 27						
h m	° ′ ″	h m		h m		h m	°	°
19. 30	20. 41. 30	21. 9	·1088					
20. 0	42. 55		(†)					
20. 15	41. 50	22. 11	·1090					
21. 9	43. 50	22. 23	·1085					
23. 18	52. 35	23. 2	·1089					
	(†)	23. 17	·1089					
		23. 59	·1084					
May 28		May 28		May 28		May 28		
	(†)	0. 0	·1084		(†)	0. 0	61 ·1	61 ·6
0. 42	20. 54. 45		***	0. 16	·02324	1. 0	62 ·0	62 ·1
2. 46	53. 25	0. 30	·1089	1. 10	·02347	2. 0	62 ·4	62 ·7
4. 40	50. 20	0. 52	·1090		·02264	3. 0	62 ·8	63 ·4
5. 35	47. 50	1. 2	·1093	4. 0	·02200	6. 0	64 ·0	64 ·8
6. 8	46. 40	1. 19	·1092	9. 33:	·01810	9. 0	66 ·0	66 ·2
8. 0	45. 45		***	15. 14	·01941	12. 0	64 ·6	65 ·0
10. 23	46. 20	2. 50	·1094	20. 15	·02220	18. 0	62 ·3	62 ·5
10. 50	47. 0	3. 2	·1105	22. 7	·02252	21. 0	62 ·0	62 ·1
13. 38	46. 10	3. 8	·1096	23. 24	·02228	22. 0	62 ·3	63 ·2
15. 5	46. 10	3. 40	·1105		(†)	23. 0	62 ·7	62 ·9
16. 26	45. 10	3. 55	·1103					
16. 56	45. 40	4. 2	·1108					
19. 5	43. 5	4. 10	·1104					
20. 8	43. 10	4. 30	·1104					
21. 12	45. 10	4. 44	·1099					
22. 33	52. 30	4. 51	·1105					
22. 45	54. 0	5. 3	·1095					
22. 58	53. 45	5. 28	·1094					
23. 33	55. 10	5. 36	·1101					
23. 36	54. 20	5. 52	·1099					
23. 59	54. 15	6. 8	·1101					
			***					
		10. 2	·1104					
		10. 10	·1106					
		10. 55	·1105					
		13. 32	·1107					
		14. 31	·1109					
		16. 32	·1109					
		17. 27	·1107					
		18. 13	·1107					
		19. 2	·1103					
		20. 1	·1098					
		21. 9	·1098					
		21. 22	·1099					
		21. 36	·1096					
		21. 40	·1099					
		22. 0	·1097					
		22. 23	·1101					
		22. 34	·1098					
		22. 47	·1107					
		23. 1	·1093					
		23. 21	·1105					
		23. 32	·1105					
			(†)					
May 29		May 29		May 29		May 29		
0. 0	20. 54. 15		(†)		(†)	0. 0	63 ·6	64 ·0
0. 22	55. 0	0. 45	·1102	1. 0	·02159*	1. 0	65 ·9	65 ·8
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 29		May 29		May 29		May 29		
h m	° ′ ″	h m		h m		h m	°	°
1. 14	20. 54. 0	1. 44	·1106	3. 0	·02032*	2. 0	66 ·0	65 ·9
1. 59	54. 50	2. 13	·1122	5. 7	·01808	3. 0	66 ·9	66 ·9
2. 29	53. 50	2. 41	·1115	9. 2:	·01547	9. 0	66 ·1	66 ·5
3. 26	55. 0	3. 13	·1104	13. 4	·01836	21. 0	61 ·5	62 ·0
3. 49	54. 45	3. 32	·1108	17. 36	·02214			
5. 57	48. 35	3. 47	·1104	19. 14	·02297			
7. 21	46. 50	4. 1	·1108		·02218			
12. 40	45. 50	4. 28	·1101	20. 56	·02262			
15. 43	48. 50	5. 6	·1106	21. 53	·02240			
	(†)	5. 51	·1100	22. 26	·02248			
16. 7	48. 0	6. 25	·1115		(†)			
16. 39	43. 40	7. 52	·1113					
17. 33	42. 50	8. 21	·1110					
18. 51	46. 30	9. 9	·1112					
19. 13	48. 35	9. 24	·1114					
19. 32	47. 10	10. 19	·1111					
19. 50	48. 0	11. 35	·1108					
20. 0	46. 0	12. 2	·1110					
20. 14	47. 55	13. 28	·1107					
20. 34	47. 25	13. 48	·1110					
22. 0	53. 20	15. 54	·1105					
22. 23	52. 20	16. 52	·1106					
22. 45	54. 45	17. 40	·1100					
	(†)	18. 1	·1102					
		18. 40	·1086					
		19. 1	·1084					
		19. 11	·1086					
		19. 35	·1078					
		20. 7	·1072					
		20. 58	·1078					
		21. 28	·1072					
		21. 39	·1075					
		22. 5	·1049					
		22. 39	·1081					
		22. 56	·1084					
		23. 12	·1074					
		23. 20	·1076					
		23. 36	·1066					
		23. 51	·1083					
			(†)					
May 30		May 30		May 30		May 30		
	(†)		(†)		(†)	1. 0	62 ·7	63 ·0
0. 29	21. 0. 45	0. 30	·1092	1. 0	·02277*	3. 0	63 ·7	64 ·0
0. 55	21. 0. 55	0. 50	·1109	3. 0	·02364*	9. 0	65 ·0	65 ·5
1. 32	20. 57. 30	1. 5	·1098	4. 28	·02350	21. 0	59 ·9	61 ·0
1. 43	55. 0		***	6. 32	·02283			
1. 52	55. 55	1. 30	·1091	8. 37	·02124			
1. 57	55. 0	1. 37	·1098	9. 16	·02128			
2. 20	56. 55	1. 46	·1096		·02100			
2. 49	56. 10	2. 1	·1102	10. 50	·02127			
3. 12	57. 40	2. 40	·1082	13. 13	·02182			
3. 55	57. 20		***	13. 37	·02167			
4. 19	54. 40	3. 12	·1096	15. 18	·02241			
4. 27	55. 10	3. 34	·1093	15. 41	·02236			
4. 35	54. 55	4. 4	·1113	16. 31	·02288			
4. 45	55. 30	4. 11	·1104	16. 53	·02300			
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 30		May 30		May 30		h m	°	°
h m	° ′ ″	h m		h m				
4. 54	20. 54. 40	4. 53	·1114	17. 35	·02343			
4. 57	55. 0	4. 59	·1112		·02245			
5. 29	51. 20		***		·02340			
5. 53	50. 40	5. 30	·1113	19. 58	·02264			
6. 10	47. 10	5. 53	·1120	23. 59	·02382			
6. 25	49. 0	6. 7	·1114					
6. 42	45. 10	6. 21	·1126					
6. 59	47. 0	6. 32	·1109					
7. 15	46. 10	6. 58:	·1123					
7. 29	43. 0	7. 20	·1107					
7. 37	44. 10	7. 35	·1118					
7. 59	29. 20	7. 45	·1113					
8. 7	33. 0	8. 0	·1133					
8. 10	33. 20	8. 5	·1122					
8. 19	43. 45	8. 11	·1126					
8. 28	44. 45	8. 33	·1087					
8. 49	36. 40	9. 0	·1102					
9. 18	44. 20	9. 21	·1093					
9. 42	44. 15	9. 32	·1092					
10. 11	49. 0	9. 45	·1099					
10. 27	46. 0	9. 54	·1097					
10. 57	48. 35	10. 6	·1101					
11. 58	47. 5	10. 17	·1098					
12. 13	47. 30	10. 31	·1098					
13. 33	44. 30	10. 40	·1102					
13. 41	45. 45	11. 45	·1097					
13. 45	45. 10	12. 2	·1102					
13. 53	47. 40	12. 34	·1101					
13. 57	46. 55	12. 40	·1101					
14. 3	47. 55	12. 54	·1096					
14. 14	46. 40	13. 8	·1102					
14. 39	40. 10	13. 38	·1087					
15. 14	40. 10	14. 4	·1095					
15. 30	42. 45	14. 29	·1098					
15. 57	42. 10	14. 47	·1109					
16. 0	42. 55	14. 55	·1106					
16. 12	42. 15	15. 4	·1113					
16. 42	44. 55	15. 10	·1109					
17. 0	44. 10	15. 16	·1122					
17. 17	41. 55		***					
17. 28	43. 5	16. 20	·1104					
17. 39	41. 45	16. 31	·1106					
17. 49	43. 0		***					
18. 5	41. 55	17. 15	·1081					
18. 24	43. 5		***					
18. 39	50. 50	18. 17	·1094					
18. 57	44. 50	18. 32	·1093					
19. 24	44. 0		***					
20. 3	46. 35	18. 50	·1101					
20. 22	46. 50	19. 24	·1092					
20. 30	48. 20	19. 50	·1103					
20. 53	50. 0	20. 0	·1089					
21. 1	49. 30	20. 47	·1086					
21. 24	51. 0	21. 0	·1082					
21. 37	50. 45	22. 12	·1088					
22. 24	52. 0	22. 22	·1076					
23. 12	53. 55	22. 41	·1087					
23. 20	53. 15	23. 7	·1092					
	(†)							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	May 30 h m		h m		h m	°	°
		23. 21	·1092					
		23. 31	·1098 ***					
		23. 59	·1100					
May 31		May 31		May 31		May 31		
	(†)	0. 0	·1100	0. 0	·02382	1. 0	60·2	61·0
0. 25	20. 54. 0	0. 17	·1093	2. 49	·02388	3. 0	61·0	61·8
1. 27	56. 0	0. 41	·1097	5. 44	·02294	9. 0	63·0	64·5
1. 58	54. 40	0. 55	·1099	10. 10	·02062	22. 50	63·7	62·5
2. 12	55. 30	1. 8	·1096	12. 4	·02040			
2. 30	54. 20	1. 32	·1096	13. 42	·02088			
3. 12	54. 35	2. 4	·1090	17. 9	·02354			
3. 43	53. 10	2. 20	·1098	19. 21	{·02457			
4. 28	52. 10	2. 45	·1097		{·02390			
5. 29	48. 20	3. 5	·1103	20. 58	·02422			
5. 47	42. 10		***	22. 46	·02340			
6. 3	46. 20	4. 4	·1100	23. 30	·02262			
6. 15	47. 30	4. 30	·1108		(†)			
6. 33	45. 20	5. 11	·1115					
6. 45	46. 30	5. 20	·1120					
7. 22	45. 50	5. 46	·1109					
7. 57	47. 5	6. 6	·1142					
8. 22	46. 0	6. 43	·1118					
9. 19	47. 20	6. 52	·1120					
9. 29	49. 20	7. 5	·1110					
10. 22	45. 15	7. 17	·1107					
10. 33	45. 30	7. 32	·1112					
10. 40	46. 30	8. 6	·1106					
10. 51	46. 0	8. 23	·1101					
11. 0	44. 35	8. 35	·1107					
11. 42	45. 15	8. 44	·1100					
12. 14	43. 0	9. 7	·1100					
12. 56	47. 15	9. 25	·1108					
13. 20	47. 55	9. 50	·1097					
13. 35	50. 0	10. 7	·1096					
14. 32	46. 55	10. 21	·1098					
15. 12	43. 40	10. 39	·1103					
15. 40	44. 30	11. 0	·1098					
16. 17	43. 50	11. 31	·1104					
16. 41	44. 30	11. 59	·1105					
16. 55	44. 10	12. 11	·1104					
17. 12	44. 50	12. 32	·1095					
18. 15	43. 25	12. 41	·1098					
18. 24	44. 0	12. 55	·1095					
18. 42	42. 50	13. 19	·1108					
18. 46	43. 40	13. 58	·1103					
19. 8	42. 50	14. 22	·1105					
19. 15	43. 20	14. 35	·1103					
19. 30	42. 30	14. 45	·1105					
20. 6	43. 10	15. 15	·1101					
20. 33	44. 50	16. 7	·1102					
20. 44	44. 0	16. 25	·1106					
21. 17	44. 40	16. 45	·1106					
22. 1	46. 15	17. 0	·1109					
23. 6	52. 0	17. 35	·1108					
23. 28	52. 20	18. 55	·1096					
	(†)	19. 5	·1096					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	May 31 h m		h m		h m	°	°
		19. 31	·1088					
		20. 2	·1084					
		20. 13	·1087 ***					
		20. 44	·1088 ***					
		21. 19	·1092 ***					
		21. 43	·1086					
		22. 22	·1084					
		22. 32	·1086 ***					
		22. 52	·1086					
		23. 22	·1083					
		23. 59	·1097					
June 1		June 1		June 1		June 1		
9. 0	20. 43. 58*	0. 0	·1097		(†)	9. 0	67·2	68·0
21. 0	43. 25*	0. 32	·1090	0. 29	·02198	21. 0	60·7	59·8
		0. 48	·1094	3. 33	·01533			
		1. 8	·1090		(†)			
		1. 40	·1092	8. 45	·01535			
		1. 56	·1087	10. 23	·01683			
		2. 7	·1088	12. 38	·01917			
		2. 33	·1084	16. 25	·02540			
		3. 1	·1088	18. 27	·02498			
		3. 20	·1084	21. 10	{·02457			
		3. 36	·1085		{·02355			
		3. 59	·1082	23. 27	·02242			
		4. 28	·1072		(†)			
		4. 48	·1084					
		5. 10	·1075					
		6. 20	·1082					
		6. 30	·1083					
		6. 53	·1092					
		7. 8	·1090					
		7. 33	·1093					
		8. 2	·1090					
		9. 2	·1084					
		9. 15	·1084					
		9. 28	·1096					
		9. 49	·1082					
		10. 7	·1085					
		10. 21	·1080					
		10. 51	·1080					
		11. 35	·1086					
		12. 24	·1099					
		12. 53	·1091					
		13. 15	·1092					
		14. 0	·1089					
		14. 22	·1090					
		15. 17	·1087					
		16. 59	·1097					
		17. 32	·1093					
		18. 33	·1079					
		19. 22	·1080					
		21. 19	·1071					
		21. 51	·1071					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 1. The Photographic Trace for the Declination Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 1 h m		h m		h m	°	°
		22. 28	·1069					
		23. 8	·1076					
		23. 30	·1079					
		23. 59	·1073					
June 2		June 2		June 2		June 2		
	(†)	0. 0	·1073		(†)	1. 0	64 ·7	64 ·8
0. 9	20. 52. 10	0. 15	·1072	1. 0	·02049*	3. 0	66 ·7	66 ·9
1. 54	55. 30		***	3. 0	·01760*	9. 0	69 ·0	69 ·5
2. 48	55. 0	0. 47	·1079	7. 50	·01555	21. 0	62 ·2	62 ·4
4. 3	51. 20	1. 13	·1080	9. 20	·01550			
4. 15	51. 15		***		·01633			
4. 40	48. 50	2. 2	·1088	13. 47:	·01707			
7. 14	44. 40	2. 17	·1086	18. 17	·02202			
7. 19	45. 10	2. 37	·1088	21. 29:	·02435			
7. 42	44. 10	3. 11	·1088	23. 59	·02380			
9. 23	45. 15	3. 26	·1091					
9. 30	43. 35	3. 57	·1090					
9. 49	44. 15	4. 19	·1098					
10. 14	41. 30	4. 56	·1092					
10. 44	43. 0	5. 41	·1104					
11. 3	41. 20	5. 53	·1104					
11. 29	42. 0	6. 25	·1098					
11. 51	40. 50	6. 45	·1097					
12. 30	42. 50	7. 22	·1099					
12. 33	43. 20	8. 18	·1096					
12. 52	44. 50	8. 34	·1090					
13. 42	42. 30	9. 7	·1094					
14. 30	43. 0	9. 22	·1090					
15. 22	41. 10	9. 35	·1104					
15. 45	41. 50	10. 2	·1088					
17. 14	40. 10	10. 25	·1090					
	(†)	10. 56	·1083					
18. 20	38. 55	11. 25	·1086					
18. 36	38. 50	12. 7	·1081					
18. 56	40. 0	12. 56	·1082					
19. 16	39. 45	13. 21	·1093					
19. 46	40. 35	13. 37	·1094					
20. 30	38. 30	14. 0	·1090					
22. 59	48. 0	17. 3	·1081					
23. 59	50. 0	17. 25	·1084					
		18. 22	·1081					
		18. 53	·1081					
		20. 20	·1072					
		21. 1	·1070					
		21. 15	·1068					
		22. 6	·1061					
		22. 9	·1062					
		22. 35	·1055					
		23. 4	·1059					
		23. 49	·1072					
			(†)					
June 3		June 3		June 3		June 3		
0. 0	20. 50. 0		(†)	0. 0	·02380	1. 0	64 ·8	65 ·2
0. 36	50. 30	0. 45	·1086	3. 15	·02176	3. 0	66 ·1	66 ·2
0. 54	52. 15	1. 20	·1075	6. 5	·02160	9. 0	66 ·2	67 ·0
1. 0	53. 0	1. 35	·1081	8. 23	·02081	21. 0	60 ·9	59 ·4

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 3		June 3		June 3		June 3		
h m	° ′ ″	h m		h m		h m	°	°
1. 29	20. 53. 5	1. 40	·1080	8. 34	·02090	22. 0	61 ·4	60 ·1
3. 36	52. 55	2. 0	·1089	9. 38	·02025	23. 0	62 ·3	61 ·1
4. 33	50. 15	2. 18	·1079	11. 37	·02043			
5. 1	50. 25	2. 46	·1099	13. 42	·02160			
5. 45	47. 15	3. 4	·1083	16. 42	·02596			
6. 3	47. 20	3. 10	·1085		·02553			
6. 24	46. 15	3. 30	·1077	19. 36	·02506			
6. 59	47. 0	3. 49	·1091	23. 2	·02370			
7. 30	45. 10	4. 0	·1088	23. 59	·02317			
8. 3	45. 20	4. 41	·1102					
8. 57	45. 40	4. 55	·1102					
9. 46	40. 30	5. 27	·1117					
10. 36	44. 35	6. 2	·1108					
12. 26	48. 10	6. 10	·1109					
13. 27	41. 15	6. 42	·1100					
14. 0	43. 0	6. 58	·1103					
15. 29	42. 35	7. 8	·1102					
15. 40	43. 30	7. 30	·1110					
17. 16	42. 40	7. 52	·1106					
17. 58	44. 5	8. 23	·1098					
18. 28	42. 10	8. 37	·1113					
20. 43	44. 55	8. 52	·1103					
21. 13	48. 50	9. 2	·1103					
	(†)	10. 0	·1081					
22. 0	54. 40	10. 22	·1086					
22. 43	58. 0	10. 47	·1084					
23. 47	20. 59. 15	11. 25	·1089					
23. 59	21. 0. 0	11. 35	·1086					
		11. 49	·1089					
		12. 8	·1087					
		12. 45	·1096					
		13. 15	·1099					
		15. 7	·1094					
		16. 41	·1095					
		17. 21	·1098					
		18. 45	·1083					
		19. 4	·1082					
		19. 26	·1074					
		19. 45	·1080					
		20. 2	·1078					
		21. 22	·1079					
		21. 39	·1080					
		21. 50	·1068					
		22. 35	·1065					
		23. 15	·1075					
		23. 59	·1091					
June 4		June 4		June 4		June 4		
0. 0	21. 0. 0	0. 0	·1091	0. 0	·02317	0. 0	63 ·0	62 ·5
0. 14	0. 50	0. 9	·1097	1. 0	·02216	1. 0	64 ·6	64 ·0
0. 24	1. 50	0. 22	·1095	4. 14:	·01673	3. 0	66 ·5	66 ·6
0. 40	2. 5	0. 45	·1099	7. 8	·01364	6. 0	69 ·0	68 ·8
0. 45	3. 0	1. 10	·1096		·01455	9. 0	66 ·3	66 ·2
1. 36	21. 3. 30	1. 16	·1098	8. 15	·01418	12. 0	63 ·3	64 ·0
2. 20	20. 59. 45	1. 32	·1097		·01500	18. 0	57 ·0	58 ·0
2. 35	21. 0. 55	1. 50	·1084	9. 28	·01505	21. 0	59 ·3	59 ·2
3. 0	20. 59. 15	2. 30	·1099	13. 10	·01816	22. 0	59 ·8	60 ·0
3. 33	58. 55	2. 46	·1093	17. 13	·02238	23. 0	60 ·3	60 ·4

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
June 4	
h m	° ′ ″
4. 0	20. 59. 0
6. 29	53. 10
9. 36	54. 10
10. 14	55. 35
12. 16	54. 35
12. 57	55. 0
14. 21	54. 15
14. 39	54. 45
15. 44	53. 45
16. 14	52. 5
19. 49	50. 45
20. 42	54. 5
21. 15	55. 0
22. 19	59. 30
	(†)
June 5	
	(†)
0. 26	21. 2. 5
0. 43	2. 45
1. 31	21. 2. 35
4. 14	20. 59. 10
4. 56	56. 10
6. 3	55. 10
6. 10	55. 50
7. 3	54. 30
7. 32	50. 45
8. 47	56. 0
9. 8	55. 10
9. 48	56. 45
10. 11	56. 20
11. 5	57. 5
12. 0	55. 10
13. 7	56. 5
13. 32	58. 55
14. 51	55. 5
15. 33	54. 50
16. 15	52. 5
17. 18	50. 0
17. 30	51. 5
17. 55	50. 55
18. 6	49. 40
18. 34	51. 55
18. 54	52. 10
19. 41	51. 0
21. 4	54. 40
21. 59	20. 59. 0
23. 25	21. 0. 50
23. 50	1. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 4	
h m	
3. 0	·1096
3. 16	·1090
3. 41	·1098
4. 32	·1104
4. 47	·1108
5. 1	·1105
5. 7	·1105
5. 26	·1093
5. 40	·1096
6. 7	·1089
6. 30	·1095
7. 8	·1089
7. 41	·1091
8. 26	·1085
10. 8	·1087
10. 28	·1085
12. 10	·1086
16. 41	·1087
17. 13	·1086
18. 10	·1087
19. 42	·1074
21. 0	·1066
22 8	·1067
	(†)
June 5	
	(†)
0. 45	·1083
1. 7	·1085
1. 22	·1083
1. 36	·1083
1. 52	·1082
2. 25	·1087
3. 36	·1086
4. 22	·1091
5. 7	·1079
5. 24	·1083
5. 32	·1084
5. 49	·1089
7. 1	·1091
7. 13	·1089
7. 45	·1103
8. 17	·1086
8. 31	·1087
9. 13	·1083
9. 31	·1085
11. 7	·1085
11. 45	·1082
12. 17	·1084
12. 30	·1083
12. 37	·1085
13. 7	·1082
13. 37	·1092
14. 24	·1089
15. 6	·1083
15. 48	·1088
17. 45	·1084
18. 29	·1085

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
June 4	
h m	
20. 8	·02468
21. 4	·02446
	(†)
23. 23	·02380
23. 59	·02372
June 5	
0. 0	·02372
0. 52	·02361
4. 2	·02242
8. 58	·02150
12. 37	·02183
14. 17	·02240
17. 40	·02424
	·02355
19. 31	·02394
	·02340
20. 21	·02343
	(†)
21. 0	·02340*

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	
June 5		
0. 0	61 ·2	61 ·1
1. 0	61 ·7	61 ·8
2. 0	62 ·6	62 ·1
3. 0	63 ·0	63 ·0
9. 0	63 ·0	63 ·3
21. 0	61 ·4	61 ·3

Greenwich Mean Solar Time.	Western Declination.
June 5	
h m	° ′ ″
23. 59	21. 1. 35
June 6	
0. 0	21. 1. 40
0. 37	1. 55
	(†)
1. 0	2. 56*
3. 0	21. 0. 12*
9. 0	20. 55. 23*
21. 0	54. 15*
June 7	
	(†)
1. 0	21. 2. 40*
3. 0	21. 0. 31*
6. 18	20. 50. 40
7. 40	48. 15
9. 14	49. 50
11. 39	50. 10
12. 7	51. 20
12. 45	50. 0
13. 10	49. 0
13. 36	49. 10
14. 20	48. 10
14. 50	48. 15
15. 3	48. 55
15. 39	48. 5
16. 2	49. 10
17. 2	47. 10
17. 14	46. 10
17. 36	45. 55
17. 49	47. 5
18. 55	45. 40
19. 0	46. 10
19. 41	45. 40
21. 9	48. 0
23. 30	56. 40
	(†)
June 8	
	(†)
4. 0	20. 53. 40
4. 18	53. 15
4. 33	53. 45
6. 12	50. 20
8. 15	51. 10
9. 41	50. 20
13. 0	50. 0
13. 58	51. 0
16. 30	47. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 5	
h m	
19. 2	·1082
22. 30	·1064
23. 7	·1066
23. 41	·1073
23. 59	·1078
June 6	
0. 0	·1078
1. 37	·1087
	(†)
3. 26	·1084*
9. 0	·1090*
21. 0	·1064*
June 7	
	(†)
1. 0	·1033*
3. 0	·1033*
5. 43	·1095
6. 7	·1090
6. 37	·1094
7. 7	·1094
7. 31	·1097
8. 51	·1095
9. 1	·1096
10. 2	·1092
10. 37	·1094
11. 55	·1097
12. 12	·1104
12. 25	·1100
12. 37	·1100
14. 35	·1103
15. 2	·1101
16. 3	·1101
16. 28	·1100
17. 2	·1101
17. 25	·1097
18. 51	·1103
19. 23	·1104
21. 8	·1103
22. 20	·1097
23. 2	·1100
23. 38	·1106
23. 59	·1104
June 8	
0. 0	·1104
	***
1. 13	·1106
	***
2. 4	·1117
	***
2. 32	·1113
	***
4. 38	·1124
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
June 6	
h m	
0. 0	·02280
6. 43	·01878
9. 28	·01810
13. 53	·01882
21. 19	·02135
22. 58	·02090
	(†)
June 7	
	(†)
1. 0	·02002*
3. 0	·01717*
7. 31	·01353
10. 2	·01340
13. 22	·01506
16. 0	·01735
21. 16	·02288
23. 0	·02394
23. 59	·02380
June 8	
0. 0	·02380
1. 21	·02314
2. 7	·02255
7. 6	·01568
	·01740
8. 19	·01638
	·01692
11. 8	·01777
13. 46	·02112
15. 59	·02451

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
June 6		
1. 0	65 ·0	64 ·0
3. 0	66 ·4	65 ·0
9. 0	67 ·0	68 ·0
21. 0	64 ·5	64 ·0
June 7		
1. 0	67 ·3	67 ·2
3. 0	69 ·0	68 ·0
9. 0	68 ·0	68 ·2
22. 30	60 ·5	61 ·5
June 8		
10. 40	63 ·0	64 ·0
21. 0	57 ·4	56 ·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 6. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 8		June 8		June 8				
h m	° ′ ″	h m		h m		h m	°	°
17. 12	20. 47. 45	4. 52	·1114 ***	16. 28	{·02428 ·02382			
18. 0	49. 0							
18. 58	49. 20	5. 23	·1124	19. 31	·02227			
19. 41	49. 10	6. 37	·1115 ***	20. 44	{·02183 ·02157			
21. 7	51. 40							
	(†)	7. 59	·1123 ***	23. 59	·01982			
23. 0	56. 10							
23. 59	57. 45	9. 43	·1122 ***					
		10. 58	·1124 ***					
		11. 20	·1129 ***					
		11. 37	·1127 ***					
		13. 5	·1132 ***					
		14. 37	·1130 ***					
		15. 16	·1125 ***					
		16. 52	·1132 ***					
		18. 0	·1129 ***					
		19. 0	·1129 ***					
		19. 52	·1119 ***					
		20. 41	·1115 ***					
		21. 26	·1116 ***					
		21. 34	·1123 ***					
		22. 7	·1122 (†)					
		22. 52	·1124 ***					
		23. 38	·1126 ***					
		23. 59	·1128					
June 9		June 9		June 9		June 9		
0. 0	20. 57. 40	0. 0	·1128	0. 0	·01982	1. 0	61·4	60·4
0. 38	58. 15	0. 39	·1131	3. 45	·01660	3. 0	63·3	63·3
1. 33	58. 55		(†)	8. 49:	·01137	9. 0	65·0	64·5
6. 39	51. 30	1. 0	·1130*	13. 31	·01348	21. 0	59·7	57·6
10. 15	51. 0	3. 22	·1120	17. 48	·01812			
11. 33	49. 45	4. 46	·1108	19. 45	·01977			
13. 0	50. 50	5. 7	·1108	21. 36	·02060			
13. 32	49. 40	5. 44	·1112	23. 2	·02022			
13. 52	49. 55	7. 16	·1109		(†)			
16. 0	49. 0	7. 36	·1110					
18. 30	46. 10	7. 52	·1108					
19. 48	46. 40	8. 46	·1108					
21. 18	48. 50	9. 18	·1106					
21. 46	50. 0	10. 15	·1112					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 9		June 9						
h m	° ′ ″	h m		h m		h m	°	°
21. 52	20. 51. 30	11. 1	·1111					
22. 5	51. 25	12. 39	·1116					
23. 46	59. 0	13. 24	·1121					
23. 59	59. 5	13. 46	·1120					
		14. 6	·1124					
		14. 55	·1121					
		15. 53	·1122					
		16. 22	·1123					
		17. 35	·1121					
		19. 33:	·1100					
		21. 7	·1102					
		21. 15	·1101					
		21. 53	·1100					
		22. 3	·1095					
		22. 17	·1100					
		22. 37	·1095					
		22. 57	·1097					
		23. 16	·1096					
		23. 46	·1097 (†)					
June 10		June 10		June 10		June 10		
0. 0	20. 59. 10		(†)		(†)	1. 0	62·5	61·1
0. 30	21. 0. 0	1. 0	·1107*	0. 15	·01941	3. 0	64·6	63·2
1. 11	20. 59. 40	1. 55	·1113	2. 6	·01804	9. 0	65·2	64·1
2. 58	57. 15	2. 14	·1121 ***	5. 4:	·01426	21. 0	60·5	60·0
	(†)			8. 6	{·01214 ·01250	22. 0	61·5	60·7
3. 0	57. 24*	2. 34	·1119 ***			23. 0	62·0	61·0
9. 0	49. 59*			11. 37:	·01272			
21. 0	49. 59	2. 51	·1122 ***	14. 45	·01460			
				19. 40	·01852			
		3. 49	·1117	21. 31	·01897			
		4. 18	·1117	23. 59	·01874			
		4. 37	·1116					
		4. 47	·1110					
		4. 58	·1115					
		5. 7	·1110 ***					
		5. 37	·1116					
		5. 47	·1110					
		6. 3	·1117					
		6. 12	·1113					
		6. 32	·1118					
		6. 43	·1114					
		7. 0	·1118					
		7. 11	·1113					
		7. 32	·1124					
		7. 42	·1119					
		8. 5	·1127					
		8. 20	·1120					
		8. 46	·1115					
		9. 22	·1122					
		9. 26	·1120					
		9. 34	·1127					
		10. 37	·1123					
		10. 47	·1125					
		11. 42	·1126					
		11. 53	·1122					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 10 h m		h m		h m	°	°
		12. 7	·1125					
		13. 30	·1131					
		14. 2	·1125					
		14. 33	·1125					
		15. 19	·1122					
		15. 51	·1122					
		16. 52	·1120					
		17. 53	·1121					
		18. 32	·1124					
		19. 30	·1123					
		19. 49	·1118					
		20. 26	·1116					
		20. 50	·1113					
		21. 7	·1110					
		21. 23	·1109					
		21. 37	·1114					
		21. 53	·1110 (†)					
		23. 30	·1109					
		23. 59	·1103					
June 11		June 11		June 11		June 11		
	(†)	0. 0	·1103	0. 0	·01874	0. 0	62 ·9	62 ·0
1. 0	20. 56. 21*	0. 7	·1115	2. 20	·01708	1. 0	63 ·8	63 ·0
1. 52	21. 0. 0	0. 29	·1115	4. 51	·01480	2. 0	64 ·8	63 ·9
2. 2	20. 58. 55	0. 47	·1118	7. 8	·01336	3. 0	65 ·9	64 ·6
3. 12	59. 0	1. 7	·1121	10. 13:	·01297	6. 0	67 ·2	66 ·0
4. 3	57. 10	1. 34	·1130	13. 50	·01474	9. 0	66 ·5	65 ·8
4. 56	54. 0	2. 4	·1128	19. 56	·01900	12. 0	65 ·2	63 ·6
5. 43	53. 20	2. 13	·1126	23. 59	·02065	21. 0	60 ·8	60 ·5
6. 28	51. 50	2. 22	·1128			22. 0	60 ·9	60 ·5
6. 53	52. 0	2. 52	·1120			23. 0	61 ·0	60 ·5
7. 15	50. 50	3. 17	·1132					
7. 53	50. 30	3. 51	·1131					
8. 36	47. 25	4. 7	·1125					
9. 16	47. 40	4. 14	·1125					
9. 49	51. 0	4. 32	·1119					
11. 5	53. 15	4. 47	·1128					
12. 5	52. 0	5. 4	·1127					
14. 0	51. 50	5. 20	·1133					
14. 22	50. 45	5. 34	·1131					
14. 58	51. 10	5. 51	·1140 ***					
15. 26	53. 35							
15. 42:	51. 15	6. 15	·1141					
16. 13	54. 0	6. 36	·1135					
16. 32	55. 0	6. 44	·1135					
17. 12	53. 55	7. 0	·1124					
17. 42	56. 10	7. 15	·1125					
18. 7	54. 40	7. 30:	·1135					
18. 18	55. 0	7. 52	·1132					
18. 27	54. 0	8. 11:	·1136					
18. 32	54. 10	8. 41	·1128					
18. 42	52. 10	9. 2	·1127					
18. 52	53. 50	9. 30	·1136					
19. 9	51. 10	9. 55	·1133					
19. 16	51. 0	10. 32	·1137					
19. 30	48. 40	10. 45	·1138					
19. 55	48. 15	11. 0	·1141					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 11 h m	° ′ ″	June 11 h m		h m		h m	°	°
20. 4	20. 49. 0	11. 11	·1140					
20. 30	48. 45	11. 19	·1142					
20. 44	49. 50	11. 29	·1139					
20. 53	49. 0	11. 40	·1141					
21. 7	51. 0	12. 2	·1141					
21. 24	50. 0	12. 8	·1144					
21. 49	52. 40	12. 21	·1141					
22. 15	53. 30	12. 30	·1143					
22. 24	54. 50	12. 53	·1140					
22. 36	54. 45 (†)	13. 7	·1142					
		13. 22	·1145					
23. 46	48. 25	13. 32	·1136					
23. 59	49. 10	13. 42	·1140					
		13. 49	·1140					
		14. 3	·1144					
		14. 15	·1141					
		14. 54	·1141					
		15. 22	·1144					
		15. 38	·1138					
		16. 17	·1134					
		16. 30	·1136					
		16. 45	·1133					
		17. 10	·1135					
		17. 28	·1141					
		18. 5	·1125					
		18. 19	·1132					
		18. 45	·1136					
		19. 36	·1124					
		20. 0	·1126					
		20. 23	·1120					
		20. 44	·1123					
		20. 51	·1118					
		20. 56	·1121					
		21. 6	·1122					
		21. 40	·1116					
		21. 46	·1118					
		22. 5	·1109					
		22. 25	·1114					
		22. 45	·1108					
		23. 2	·1109					
		23. 11	·1114 (†)					
June 12		June 12		June 12		June 12		
0. 0	20. 49. 10		(†)	0. 0	·02065	0. 0	61 ·3	60 ·7
0. 33	51. 0	0. 56	·1110 ***	0. 56	·02104	1. 0	61 ·7	61 ·3
1. 24	20. 59. 0				·02022	2. 0	61 ·6	61 ·0
2. 28	21. 0. 50	1. 20	·1110 ***	2. 12	·02078	3. 0	62 ·1	61 ·3
2. 58	20. 57. 50				·02011	9. 0	62 ·7	62 ·1
3. 12	58. 10	1. 35	·1107	4. 29	·02055	21. 0	59 ·9	59 ·3
3. 22	57. 0	1. 53	·1117		·02006			
3. 30	57. 15	2. 4	·1109	8. 7	·02014			
3. 42	56. 15	2. 25	·1120	11. 14	·02032			
7. 24	51. 0	2. 37	·1116		·01948			
7. 39	51. 40	2. 57	·1131	12. 44	·01970			
8. 35	51. 0	3. 16	·1110	13. 5	·01945			
9. 29	47. 50	3. 36	·1126	14. 53	·02022			
9. 52	49. 5	3. 44	·1123		·01964			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 12	° ′ ″	June 12		June 12			°	°
h m		h m		h m		h m		
10. 10	20. 48. 30	3. 51	·1127	16. 40	·02058			
11. 31	50. 10	4. 3	·1125		·02012			
11. 55	53. 0	4. 20	·1130	18. 1	·02067			
12. 25	51. 10	4. 30	·1128		·02026			
12. 39	53. 20	4. 47	·1133	19. 23	·02064			
12. 45	56. 10	5. 21	·1126		·02028			
13. 25	46. 0	5. 39	·1131	21. 0	·02052			
13. 57	50. 20	5. 51	·1128	22. 14	·02020			
14. 18	50. 0	6. 0	·1130	23. 59	·01957			
14. 33	51. 10	6. 7	·1127					
14. 51	50. 0	6. 32	·1130					
15. 12	49. 45	6. 42	·1128					
15. 29	50. 50	7. 35	·1127					
16. 26	48. 15	8. 0	·1138					
16. 57	47. 55	8. 8	·1136					
17. 8	49 0	8. 22	·1138					
17. 27	47. 50	9. 23	·1123					
17. 48	48. 40	9. 43	·1128					
18. 15	46. 10	10. 15	·1130					
18. 34	47. 50	10. 53	·1123					
18. 45	46. 10	11. 34	·1125					
19. 31	46. 10	11. 45	·1122					
20. 55	48. 5	11. 52	·1126					
21. 9	49. 30	12. 25	·1127					
21. 33	48. 55	12. 38	·1123					
22. 7	54. 40	13. 8	·1140					
22. 23	55. 30	13. 49	·1126					
22. 31	57. 30	14. 33	·1123					
22. 38	57. 40	14. 52	·1126					
22. 58	20. 59. 50	15. 34	·1126					
23. 55	21. 0. 0	16. 8	·1130					
	(†)	17. 34	·1122					
		18. 0	·1125					
		18. 22	·1122					
		18. 56	·1120					
		19. 39	·1119					
		21. 7	·1109					
		21. 49	·1110					
		22. 4	·1105					
		22. 18	·1104					
		22. 23	·1106					
		22. 37	·1101					
		22. 45	·1094					
		22. 50	·1099					
		23. 7	·1100					
		23. 32	·1111					
		23. 52	·1114					
			(†)					
June 13		June 13		June 13		June 13		
	(†)		(†)	0. 0	·01957	1. 0	62 ·0	61 ·4
0. 5	21. 0. 10	0. 7	·1110	1. 26	·01936	3. 0	63 ·7	62 ·9
0. 37	1. 45	0. 52	·1124	2. 56	·01822	9. 0	64 ·3	64 ·0
1. 0	5. 0	0. 54	·1124	3. 15	·01800	21. 0	57 ·9	58 ·1
2. 29	1. 0	1. 6	·1134	6. 41	·01548			
3. 27	21. 0. 0	1. 22	·1130	8. 21	·01485			
5. 34	20. 53. 50	1. 38	·1118	10. 8	·01496			
6. 15	53. 45	2. 17	·1131	10. 52	·01518			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 13	° ′ ″	June 13		June 13			°	°
h m		h m		h m		h m		
6. 45	20. 50. 45	2. 22	·1124	11. 8	·01517			
	***	2. 31	·1135	13. 8	·01660			
8. 3	52. 50	2. 38	·1124	17. 56	·02062			
	***		***	20. 18	·02193			
8. 45	50. 50	3. 2	·1119	20. 46	·02133			
	***	3. 18	·1126		·02106			
9. 18	52. 10	3. 29	·1123	21. 30	·02094			
	***	3. 48	·1116	21. 58	·02102			
10. 10	46. 0	4. 15	·1125	22. 16	·02086			
	***	4. 25	·1115	22. 22	·02020			
10. 50	52. 35		***	23. 59	·01972			
	***	5. 2	·1117					
11. 16	46. 50	5. 13	·1122					
	***	5. 28	·1117					
12. 3	47. 35	5. 45	·1119					
	***	6. 17	·1127					
13. 10	51. 35	6. 30	·1127					
	***	6. 48	·1130					
16. 44	49. 0	7. 21	·1127					
	***	7. 57	·1133					
17. 9	50. 0	8. 30	·1126					
17. 30	46. 50	8. 50	·1132					
17. 40	47. 20	9. 22	·1125					
17. 45	46. 10	9. 52	·1132					
17. 52	48. 10	10. 12	·1124					
18. 0	47. 30	10. 53	·1133					
18. 19	49. 20	11. 8	·1124					
18. 32	48. 10		***					
18. 45	49. 50	12. 23	·1124					
18. 57	49. 10	12. 46	·1134					
19. 43	50. 20		***					
19. 49	49. 40	13. 21	·1129					
20. 3	50. 30	13. 43	·1128					
20. 10	50. 10	14. 0	·1130					
20. 20	51. 20	14. 19	·1128					
20. 34	51. 0		***					
21. 0	52. 10	14. 56	·1129					
21. 21	50. 0		***					
21. 41	53. 50	15. 17	·1133					
22. 14	54. 15	15. 51	·1129					
22. 33	57. 0	16. 16	·1132					
22. 51	56. 10	16. 39	·1128					
23. 19	50. 0	17. 14	·1131					
23. 29	20. 52. 55	17. 44	·1122					
23. 59	21. 0. 0	17. 55	·1126					
		18. 40	·1123					
		18. 55	·1120					
			***					
		19. 0	·1119					
		19. 7	·1122					
		19. 43	·1122					
		19. 59	·1117					
		20. 21	·1120					
		20. 37	·1117					
		20. 48	·1118					
		21. 23	·1114					
			***					
		22. 10	·1110					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁚ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 13 h m		h m		h m	°	°
		22. 25	·1115					
		22. 56	·1112					
		23. 15	·1113					
		23. 22	·1103					
		23. 37	·1113					
		23. 59	·1109					
June 14		June 14		June 14		June 14		
0. 0	21. 0. 0	0. 0	·1109	0. 0	·01972	1. 0	60·4	60·1
0. 17	20. 58. 55	0. 10	·1104	1. 42	·01953	3. 0	60·9	60·7
	***	0. 44	·1115	2. 2	·01930	9. 0	60·6	60·4
1. 0	21. 1. 50	1. 2	·1106	3. 47	·01921	21. 50	56·3	57·2
1. 20	1. 5	1. 9	·1107	4. 16	·01932			
1. 28	21. 2. 0	1. 30	·1128	6. 9	·01913			
	***	1. 52	·1099	9. 43	·01894			
2. 31	20. 58. 50	2. 23	·1131	11. 57	·01952			
	***	2. 30	·1129		·02028			
3. 34	59. 0	2. 51	·1143	13. 49	·01962			
3. 51	56. 25	3. 18	·1130	15. 3	·02040			
4. 14	59. 0	3. 42	·1103	15. 12	·02002			
	***	4. 0	·1115	15. 53	·02033			
5. 50	54. 0	4. 10	·1116	15. 58	·02020			
6. 10	50. 50	4. 16	·1108	17. 6	·02072			
	***	4. 26	·1116	17. 16	·02053			
7. 12	51. 0	4. 37	·1112	17. 43	·02079			
7. 35	52. 40	4. 55	·1125	17. 52	·02066			
	***	5. 6	·1121	18. 18	·02077			
8. 15	51. 10	5. 29	·1134	18. 27	·02068			
8. 26	52. 50	5. 47	·1128	19. 20	·02082			
	***	5. 53	·1139	20. 17	·02060			
12. 35	52. 0	6. 2	·1125	22. 5	·02054			
13. 9	58. 30	6. 19	·1129	22. 23	·02035			
13. 33	57. 50		***	22. 40	·02028			
13. 58	51. 50	6. 52	·1128		(†)			
14. 19	52. 0	7. 21	·1137					
14. 47	56. 30	8. 7	·1129					
15. 14	55. 0	8. 20	·1132					
15. 20	57. 10	8. 39	·1127					
15. 25	54. 30	9. 2	·1128					
15. 58	50. 55	9. 15	·1129					
	***	10. 45	·1126					
17. 30	51. 10	11. 2	·1128					
	***	11. 20	·1126					
17. 49	53. 10	11 38	·1131					
	***	12. 6	·1128					
18. 39	49. 10	12. 21	·1132					
19. 12	50. 30	12. 35	·1128					
19. 15	54. 0	12. 54	·1129					
19. 18	50. 0	13. 30	·1139					
19. 58	50. 0	14. 2	·1131					
20. 8	48. 30	14. 32	·1129					
20. 26	50. 20	15. 7	·1137					
21. 3	50. 0	15. 58	·1129					
22. 38	55. 10	17. 33	·1126					
	(†)	17. 54	·1126					
		18. 33	·1118					
		18. 55	·1122					
		19. 19	·1117					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 14 h m		h m		h m	°	°
		21. 43	·1108					
		22. 21	·1106					
		22. 41	·1108					
			(†)					
June 15		June 15		June 15		June 15		
8. 50	20. 52. 34*	8. 50	·1123*	8. 50	·01287*	8. 50	63·2	63·0
21. 0	47. 54*	21. 0	·1105*	21. 0	·01798*	21. 0	57·9	57·9
	(†)							
23. 26	56. 5							
23. 59	58. 0							
June 16		June 16		June 16		June 16		
0. 0	20. 58. 5	0. 0	·1108	0. 0	·01796	1. 0	59·5	59·7
1. 7	59. 0	0. 43	·1112	0. 4	·01725	3. 0	61·5	61·6
1. 38	59. 0	1. 1	·1126	0. 40	·01723	9. 0	62·9	63·1
3. 27	56. 10		***	2. 37	·01543	21. 0	59·2	58·8
6. 47	51. 0	1. 55	·1132	6. 16	·01276			
7. 45	53. 0		***	9. 55	·01100			
7. 55	51. 40	2. 54	·1125	11. 29	·01114			
8. 9	53. 0	3. 39	·1133	11. 46	·01128			
9. 0	49. 10	3. 52	·1134	12. 15	·01132			
9. 10	51. 20	4. 0	·1129	16. 36	·01490			
9. 19	50. 10	4. 11	·1133	16. 54	·01484			
9. 32	52. 10	4. 32	·1130	18. 57	·01610			
9. 51	50. 45	4. 55	·1133	21. 51	·01692			
10. 7	51. 0	5. 14	·1140	23. 59	·01613			
10. 30	47. 30	5. 19	·1140					
11. 10	51. 0	5. 46	·1149					
11. 24	50. 0	6. 10	·1132					
11. 57	54. 20	6. 17	·1139					
13. 0	51. 0	6. 23	·1136					
13. 26	53. 0	6. 37	·1156					
13. 54	51. 30	6. 49	·1140					
14. 5	51. 50	6. 57	·1138					
14. 14	51. 0	7. 7	·1145					
14. 47	51. 10	7. 14	·1139					
15. 18	49. 50	7. 24	·1145					
15. 45	52. 20	7. 47	·1136					
15. 58	51. 30	8. 4	·1153					
16. 17	53. 50	8. 19	·1137					
16. 35	52. 5	8. 32	·1135					
	***	8. 37	·1138					
17. 6	58. 20	8. 58	·1132					
17. 19	56. 0	9. 24	·1144					
17. 30	57. 40	9. 42	·1136					
17. 38	56. 0	9. 50	·1138					
18. 5	54. 50	10. 16	·1129					
18. 38	55. 0		***					
18. 46	53. 45	11. 0	·1135					
19. 0	54. 15	11. 16	·1130					
19. 18	52. 45	11. 35	·1119					
19. 25	50. 50	11. 49	·1133					
19. 40	51. 50		***					
19. 49	50. 0	12. 7	·1135					
19. 59	51. 10		***					
20. 8	50. 40	12. 49	·1131					
20. 18	51. 0	13. 1	·1128					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 15. The Photographic Traces for the three Magnetometers were entirely lost in consequence of a stoppage in the gas-pipes.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 16		June 16						
h m	° ′ ″	h m		h m		h m	°	°
20. 36	20. 49. 0	13. 10	·1135					
21. 35	51. 10	13. 23	·1133					
21. 56	50. 30		***					
22. 15	52. 30	14. 28	·1139					
23. 27	56. 0		***					
23. 46	59. 0	15. 5	·1133					
23. 59	58. 20	15. 33	·1136					
		15. 56	·1133					
		16. 13	·1127					
		16. 33	·1130					
			***					
		17. 9	·1126					
		17. 35	·1131					
		17. 45	·1127					
		17. 49	·1132					
		18. 1	·1122					
		18. 14	·1126					
		18. 28	·1121					
		18. 35	·1122					
		18. 46	·1119					
		18. 59	·1121					
		19. 7	·1117					
		19. 17	·1120					
			***					
		20. 42	·1119					
		21. 4	·1110					
		21. 7	·1136					
		21. 16	·1113					
		21. 19	·1123					
		21. 23	·1106					
			***					
		22. 19	·1113					
			***					
		23. 2	·1111					
		23. 35	·1106					
		23. 44	·1117					
		23. 59	·1112					
June 17		June 17		June 17		June 17		
0. 0	20. 58. 20	0. 0	·1112	0. 0	·01613	1. 0	61 ·5	61 ·5
0. 7	58. 10	0. 8	·1110	1. 26	·01552	3. 0	63 ·5	63 ·6
0. 42	59. 0	0. 56	·1117	4. 8	·01293	9. 0	64 ·5	64 ·8
6. 17	52. 30	1. 15	·1125	4. 40	·01222	21. 0	58 ·4	58 ·9
6. 30	53. 15	1. 30	·1117	6. 28	·01034	22. 0	59 ·0	59 ·0
6. 43	53. 5	1. 46	·1117	6. 43	·01026	23. 0	59 ·0	59 ·3
7. 12	49. 40	2. 15	·1128	7. 13	·00960			
7. 41	48. 10		(†)	7. 39	·00988			
8. 23	52. 10	3. 0	·1128	8. 26	·01014			
	***	3. 2	·1128	10. 2	·01020			
9. 45	51. 30	3. 9	·1126	12. 8	·01078			
	*	3. 33	·1131	12. 41	·01104			
10. 30	52. 55	3. 41	·1129	16. 21	·01410			
	***	4. 22	·1128	20. 7	·01637			
10. 58	52. 0	4. 43	·1144	22. 12	·01708			
	***	4. 52	·1134	23. 30	{·01730			
			***		·01638			
11. 30	55. 20							
12. 6	51. 40	5. 28	·1143	23. 59	·01652			
12. 15	53. 0	5. 37	·1137					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 17		June 17						
h m	° ′ ″	h m		h m		h m	°	°
12. 50	20. 45. 10	6. 16	·1134					
13. 28	49. 30	6. 28	·1152					
	***	6. 39	·1152					
15. 28	50. 0	6. 58	·1141					
15. 43	49. 0	7. 5	·1142					
16. 15	49. 0	7. 26	·1134					
16. 30	50. 0	7. 45	·1141					
17. 14	48. 45	8. 0	·1142					
17. 32	49. 50	9. 2	·1134					
	***	9. 56	·1134					
18. 19	47. 0	10. 28	·1141					
18. 34	48. 10	10. 58	·1139					
	***	11. 17	·1141					
19. 34	46. 30	11. 54	·1149					
21. 30	50. 45	12. 3	·1144					
22. 5	51. 0	12. 10	·1145					
23. 3	55. 0	13. 30	·1131					
23. 22	54. 40	14. 5	·1135					
23. 50	56. 50	15. 52	·1136					
23. 59	56. 20	16. 40	·1133					
		17. 22	·1134					
		18. 19	·1128					
			***					
		20. 13	·1120					
		20. 15	·1121					
		20. 47	·1118					
		21. 16	·1118					
		22. 7	·1117					
		22. 17	·1120					
		22. 41	·1114					
		23. 6	·1122					
		23. 27	·1117					
		23. 59	·1118					
June 18		June 18		June 18		June 18		
0. 0	20. 56. 30	0. 0	·1118	0. 0	·01652	0. 0	59 ·7	59 ·9
1. 35	55. 50	0. 7	·1118	0. 52	·01660	1. 0	60 ·3	60 ·4
2. 26	57. 0		***	1. 45	·01647	2. 0	61 ·1	61 ·0
3. 12	56. 30	0. 34	·1126	7. 42	·01313	3. 0	61 ·8	62 ·0
4. 45	53. 20	1. 0	·1126	9. 51	·01260	6. 0	63 ·1	63 ·2
10. 13	52. 40	1. 30	·1130	12. 39	·01338	9. 0	63 ·0	63 ·2
13. 0	51. 20	1. 34	·1127	15. 2	·01475	12. 0	61 ·3	62 ·0
14. 21	53. 0		***	19. 44	·01812	18. 0	57 ·1	58 ·0
15. 12	50. 45	2. 2	·1133	22. 0	·01896	21. 0	57 ·3	58 ·2
16. 0	50. 50	2. 12	·1132	22. 18	·01907	22. 0	57 ·3	58 ·2
18. 27	46. 0	2. 24	·1136	23. 59	·01900	23. 0	57 ·8	58 ·4
19. 48	45. 30		***					
21. 26	48. 15	3. 7	·1133					
23. 34	55. 55		***					
23. 48	20. 56. 0	3. 43	·1139					
23. 59	21. 0. 55		***					
		4. 13	·1142					
			***					
		4. 50	·1140					
			***					
		5. 45	·1138					
			***					
		6. 6	·1141					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 18 h m		h m		h m	°	°
		6. 17	·1140 ***					
		9. 10	·1136					
		9. 50	·1135					
		10. 4	·1138					
		10. 22	·1136					
		11. 36	·1137					
		12. 23	·1140					
		12. 43	·1139					
		13. 52	·1140					
		14. 17	·1137					
		14. 45	·1140					
		15. 40	·1137					
		16. 52	·1138					
		17. 53	·1137					
		18. 37	·1133					
		19. 42	·1130					
		20. 40	·1130					
		21. 10	·1127					
		21. 25	·1128					
		22. 7	·1124					
		23. 38	·1122 (†)					
June 19		June 19		June 19		June 19		
0. 0	21. 0. 55		(†)	0. 0	·01900	0. 0	58 ·4	58 ·6
1. 23	3. 35 ***	0. 4	·1123 ***	0. 33	·01884	1. 0	58 ·9	58 ·9
				1. 8	·01888	2. 0	59 ·5	59 ·8
2. 27	21. 0. 40	1. 7	·1132	1. 14	·01904	3. 0	60 ·0	60 ·3
2. 45	20. 58. 5 ***	1. 35	·1143 ***	1. 32	·01902	9. 0	61 ·3	61 ·5
					·01713	21. 0	57 ·0	57 ·2
3. 18	59. 20 ***	2. 2	·1136 ***	5. 23	·01477			
				7. 13	·01380			
4. 16	59. 20	2. 15	·1143 ***	7. 18	·01392			
4. 33	58. 15 ***			7. 34	·01363			
		2. 46	·1140	8. 48	·01340			
6. 12	56. 10 ***	2. 56	·1146	10. 0	·01331			
		3. 0	·1141	12. 46	·01413			
11. 59	56. 10	3. 15	·1152	14. 44	·01510			
12. 15	59. 0	3. 31	·1152	15. 33	·01518			
12. 51	55. 0	3. 37	·1148	19. 11	·01778			
12. 59	55. 45	3. 43	·1154	19. 23	·01806			
13. 58	53. 30	3. 50	·1146	21. 37	·01855			
16. 10	51. 0	4. 0	·1150 ***	22. 42	·01817			
17. 36	45. 55			22. 48	·01823			
18. 6	47. 50	4. 20	·1147	23. 59	·01777			
18. 19	44. 45	4. 32	·1150 ***					
18. 25	47. 0 ***	5. 7	·1148					
18. 54	44. 50	5. 22	·1143					
19. 10	47. 5	5. 35	·1147					
19. 30	54. 0 ***	5. 45	·1155					
		5. 53	·1152					
20. 2	58. 20	6. 7	·1157					
20. 17	20. 55. 10	6. 11	·1153					
21. 1	21. 0. 20	6. 15	·1156					
21. 28	0. 10	6. 16	·1141					
21. 50	21. 3. 55	6. 23	·1147					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 19 h m	° ′ ″	June 19 h m		h m		h m	°	°
22. 29	20. 59. 0	6. 31	·1146					
23. 31	58. 20 (†)	6. 54	·1150					
		7. 2	·1159					
		7. 4	·1156					
		7. 10	·1158					
		7. 13	·1146					
		7. 17	·1161					
		7. 25	·1157					
		7. 32	·1149					
		7. 42	·1149					
		7. 52	·1154					
		8. 17	·1153					
		8. 32	·1148					
		9. 7	·1148					
		9. 33	·1153					
		9. 45	·1148 ***					
		10. 16	·1152					
		10. 22	·1149					
		10. 30	·1156					
		10. 37	·1152 ***					
		11. 35	·1154					
		11. 37	·1157					
		12. 9	·1155					
		12. 22	·1160					
		13. 0	·1151					
		13. 20	·1150					
		13. 38	·1147					
		14. 4	·1146					
		14. 22	·1144 ***					
		14. 44	·1140 ***					
		15. 8	·1142 ***					
		16. 3	·1143					
		16. 11	·1147 ***					
		16. 31	·1142					
		16. 37	·1148					
		16. 45	·1144					
		16. 48	·1146 ***					
		17. 30	·1145					
		17. 40	·1142 ***					
		18. 2	·1144 ***					
		18. 29	·1130 ***					
		18. 37	·1131 ***					
		19. 4	·1119 ***					
		19. 22	·1105 ***					
		20. 29	·1128 ***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	June 19 h m		h m		h m	°	°
		20. 51	·1120					
			***					
		21. 5	·1121					
		21. 26	·1117					
			***					
		21. 58	·1131					
			***					
		22. 34	·1130					
		22. 52	·1142					
			***					
		23. 7	·1133					
		23. 21	·1142					
		23. 34	·1131					
			(†)					
June 20		June 20		June 20		June 20		
	(†)		(†)	0. 0	·01777	1. 0	59·2	59·0
0. 11	21. 3. 0	0. 11	·1134	2. 47	·01654	3. 0	59·8	59·8
0. 40	2. 10	0. 23	·1143	3. 6	·01652	9. 0	58·9	59·0
0. 51	3. 20	0. 45	·1128	3. 27	·01633	21. 0	56·8	57·4
0. 59	2. 20	0. 52	·1133	4. 7	·01640			
1. 18	2. 10	1. 5	·1123	4. 45	·01612			
1. 26	3. 0	1. 24	·1120	4. 53	·01636			
1. 48	21. 1. 15	1. 35	·1128	4. 59	·01618			
2. 20	20. 59. 50	1. 45	·1128	5. 54	·01593			
2. 30	21. 1. 0		***	6. 29	·01614			
2. 59	20. 59. 0	2. 13	·1140	8. 0	·01595			
3. 15	21. 0. 0	2. 23	·1137	11. 51	·01658			
3. 37	20. 58. 20	2. 41	·1146	14. 56	·01740			
4. 12	59. 50	3. 2	·1131	15. 23	·01771			
4. 49	20. 58. 15	3. 22	·1140	15. 44	·01770			
5. 0	21. 0. 0	3. 42	·1119	20. 5	·01927			
	***	3. 56	·1119	21. 53	·01892			
5. 57	20. 57. 50	4. 22	·1144	23. 59	·01870			
6. 16	55. 0	4. 40	·1122					
6. 57	58. 0		(†)					
	***	9. 0	·1132					
7. 23	49. 5	9. 2	·1133					
7. 51	57. 50	9. 58	·1133					
	***	10. 10	·1136					
13. 1	54. 40	10. 42	·1134					
13. 17	56. 0	12. 6	·1133					
13. 42	56. 55	12. 15	·1135					
14. 7	55. 50	12. 30	·1135					
14. 13	57. 5	12. 37	·1141					
14. 44	53. 10	12. 58	·1137					
14. 52	53. 30	13. 22	·1142					
15. 0	52. 0	13. 34	·1136					
15. 15	54. 0	13. 52	·1137					
15. 35:	58. 0	14. 1	·1141					
16. 30	53. 50	14. 13	·1136					
17. 48	51. 20		***					
17. 57	52. 10	14. 32	·1135					
18. 4	51. 50	14. 40	·1126					
18. 12	53. 0	14. 58	·1127					
18. 20	50. 40	15. 8	·1132					
18. 39	51. 10	15. 19	·1133					
18. 45	53. 30	15. 34	·1131					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 20 h m	° ′ ″	June 20 h m		h m		h m	°	°
19. 3:	20. 49. 50	15. 56	·1134					
19. 20	52. 30	16. 13	·1133					
	***	16. 32	·1134					
20. 25	52. 10	17. 0	·1128					
20. 30	53. 10	17. 7	·1130					
20. 43	52. 10	17. 48	·1129					
23. 10	59. 10	18. 6	·1127					
23. 19	57. 45		***					
23. 59	58. 10	18. 22	·1132					
		18. 38	·1122					
			***					
		18. 56	·1126					
		20. 5	·1118					
		20. 12	·1120					
		20. 19	·1116					
			***					
		21. 25	·1118					
			***					
		21. 42	·1117					
			***					
		22. 0	·1110					
			***					
		22. 30	·1116					
		22. 40	·1122					
		22. 47	·1123					
		23. 20	·1113					
		23. 59	·1115					
June 21		June 21		June 21		June 21		
0. 0	20. 58. 10	0. 0	·1115	0. 0	·01870	1. 0	58·5	58·6
1. 53	21. 0. 0		***	1. 43	·01836	3. 0	59·9	60·0
5. 15	20. 53. 0	0. 38	·1127	5. 14	·01603	9. 0	61·2	61·2
6. 37	52. 0		***	8. 17	·01432	22. 15	58·0	59·0
	***	1. 0	·1124	10. 38	·01440			
12. 11	53. 10		***	13. 31	·01530			
13. 19	55. 40	2. 8	·1125	16. 27	·01677			
	***		***	20. 0:	·01846			
15. 33	53. 30	3. 23	·1125	21. 44	·01768			
15. 43	53. 50		***	23. 59	·01774			
	***	4. 7	·1126					
18. 30	50. 30		***					
	***	4. 36	·1132					
19. 43	51. 0		***					
22. 26	20. 57. 5	4. 52	·1130					
23. 3	21. 0. 10		***					
23. 17	20. 58. 50	5. 19	·1135					
23. 59	59. 45		***					
		5. 49	·1135					
			***					
		6. 1	·1138					
			***					
		6. 32	·1139					
		6. 48	·1140					
		7. 30	·1145					
		8. 37	·1144					
		9. 8	·1144					
		10. 2	·1141					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
June 22	
0. 0	20. 59. 40
0. 59	21. 0. 10
6. 5	20. 53. 55
11. 27	53. 5
11. 43	52. 40
	***
14. 0	52. 0
14. 15	53. 0
14. 47	50. 35
15. 8	51. 10
	***
16. 43	47. 0
17. 27	50. 20
	***
18. 52	48. 30
19. 5	49. 20
19. 36	47. 40
21. 7	51. 5
21. 25	51. 25
23. 18	56. 10
23. 30	58. 0
23. 59	58. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 21	
h m	
10. 38	·1141
11. 17	·1139
	***
12. 27	·1138
13. 13	·1140
13. 38	·1138
14. 4	·1141
14. 10	·1138
	***
15. 13	·1137
	***
15. 26	·1135
	***
16. 18	·1134
	***
17. 22	·1132
	***
17. 43	·1133
	***
18. 38	·1132
	***
21. 15	·1120
	***
21. 22	·1122
	***
22. 35	·1122
	***
22. 59	·1140
23. 3	·1136
23. 8	·1132
23. 59	·1136
June 22	
0. 0	·1136
1. 30	·1139
1. 51	·1138
2. 11	·1141
2. 24	·1139
3. 7	·1142
3. 28	·1148
4. 13	·1141
4. 34	·1140
4. 50	·1142
5. 7	·1141
5. 35	·1146
5. 50	·1144
6. 4	·1146
6. 49	·1145
7. 0	·1148
7. 10	·1146
8. 24	·1146
8. 46	·1144
9. 4	·1147
9. 32	·1144
10 15	·1148
10. 44	·1144
11. 1	·1148
11. 8	·1146

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June 22	
0. 0	·01774
0. 48	·01788
5. 7	·01642
6. 54	·01540
10. 38:	·01391
14. 49	·01406
20. 0	·01555
20. 21	·01547
23. 59	·01580

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
June 22		
8. 0	62 ·7	62 ·3
21. 0	60 ·6	60 ·4

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
June 23	
0. 0	20. 58. 0
0. 11	58. 50
0. 27	58. 5
0. 35	59. 50
0. 53	20. 59. 50
1. 18	21. 1. 10
2. 3	0. 25
2. 23	2. 30
2. 45	0. 15
3. 6	21. 1. 15
5. 48	20. 53. 10
6. 12	53. 50
7. 8	52. 30
7. 44	53. 0
9. 34	52. 0
9. 55	52. 30
10. 35	50. 0
10. 55	51. 45
11. 25	51. 35
11. 43	57. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 22	
h m	
11. 19	·1147
11. 31	·1143
12. 43	·1143
12. 49	·1145
13. 30	·1143
14. 3	·1146
14. 13	·1150
14. 34	·1148
14. 40	·1142
14. 46	·1145
15. 25	·1142
16. 4	·1140
16. 10	·1141
16. 39	·1134
17. 20	·1138
17. 37	·1138
18. 2	·1141
18. 30	·1137
	***
18. 49	·1140
	***
19. 9	·1135
19. 34	·1135
20. 4	·1138
21. 0	·1132
21. 11	·1132
21. 37	·1127
21. 52	·1128
21. 57	·1132
22. 7	·1125
22. 22	·1123
22. 31	·1128
22. 51	·1121
23. 12	·1121
23. 47	·1110
23. 59	·1115
June 23	
0. 0	·1115
0. 7	·1115
1. 14	·1117
1. 52	·1112
2. 26	·1146
2. 44	·1132
2. 59	·1141
3. 29	·1134
3. 47	·1126
4. 4	·1142
4. 9	·1142
4. 20	·1150
4. 47	·1146
4. 59	·1152
5. 22	·1137
5. 30	·1138
5. 35	·1135
5. 43	·1136
5. 53	·1129
6. 10	·1140

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June 23	
0. 0	·01580
2. 3	·01582
4. 25	·01377
7. 37	·01018
10. 38	·01044
13. 18:	·01146
16. 6	·01494
19. 46:	·01850
22. 28	·01908
23. 59	·01852

Greenwich Mean Solar Time.	Reading of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
June 23		
1. 0	61 ·3	61 ·2
3. 0	62 ·7	63 ·0
9. 5	65 ·8	66 ·1
21. 0	59 ·4	59 ·1

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June23		June23						
h m	° ′ ″	h m		h m		h m	°	°
12. 12	20. 47. 45	6. 36	·1141					
12. 44	53. 5	7. 2	·1131					
13. 7	51. 25	7. 39	·1141					
15. 0	51. 0		***					
15. 15	52. 30	8. 30	·1133					
16. 0	49. 50	8. 37	·1134					
16. 59	52. 10	9. 7	·1129					
17. 46	49. 0	9. 30	·1130					
19. 10	47. 0	9. 56	·1127					
20. 21	47. 30	10. 19	·1122					
21. 43	50. 45	10. 26	·1123					
23. 50	58. 50	10. 37	·1121					
23. 59	58. 50	10. 45	·1123					
		10. 52	·1120					
		11. 2	·1126					
		11. 22	·1125					
		11. 34	·1131					
		11. 41	·1130					
		11. 47	·1133					
		11. 52	·1132					
		12. 17	·1142					
		12. 42	·1137					
		12. 58	·1130					
		13. 21	·1131					
		13. 32	·1128					
		14. 8	·1124					
		15. 0	·1130					
		15. 40	·1127					
		16. 8	·1129					
		16. 42	·1125					
		17. 39	·1126					
		18. 30	·1123					
		19. 22	·1115					
		20. 7	·1111					
		22. 0	·1106					
		22. 15	·1106					
		22. 23	·1104					
		22. 35	·1107					
		22. 45	·1107					
		23. 5	·1110					
		23. 17	·1110					
			(†)					
June24		June24		June24		June24		
0. 0	20. 58. 50		(†)	0. 0	·01852	1. 0	62 ·1	62 ·0
0. 33	21. 0. 10	1. 1	·1120	3. 50	·01578	3. 0	63 ·9	64 ·0
1. 0	20. 59. 55	1. 28	·1125	9. 26:	·01010	9. 0	66 ·8	67 ·5
1. 38	21. 1. 50	1. 48	·1137	14. 59	·01320	21. 0	59 ·7	60 ·0
2. 35	1. 30	2. 22	·1130	17. 14	·01608	22. 0	60 ·0	60 ·1
2. 48	1. 0	2. 34	·1134	20. 50:	·01936	23. 0	60 ·4	60 ·6
3. 21	1. 30	2. 55	·1130	23. 59	·01945			
3. 52	21. 0. 40	3. 11	·1136					
5. 21	20. 56. 0	3. 51	·1136					
5. 44	56. 45	4. 14	·1126					
8. 33	53. 50	5. 0	·1132					
8. 54	50. 10	5. 38	·1127					
	***	5. 54	·1136					
10. 43	54. 0	6. 5	·1133					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June24		June24						
h m	° ′ ″	h m		h m		h m	°	°
11. 36	20. 54. 0	6. 20	·1136					
12. 21	52. 30	7. 4	·1130					
12. 57	53. 50	7. 22	·1136					
14. 26	51. 0	7. 29	·1136					
19. 43	48. 10	7. 42	·1138					
19. 49	47. 40	8. 46	·1130					
20. 42	48. 20	9. 22	·1134					
21. 1	49. 10	9. 52	·1126					
23. 28	20. 59. 40	10. 19	·1121					
23. 42	21. 0. 30	11. 0	·1116					
23. 59	1. 10	11. 35	·1122					
		12. 17	·1118					
		12. 44	·1122					
		13. 19	·1122					
		14. 10	·1124					
		15. 6	·1120					
		16. 5	·1124					
		16. 27	·1125					
		17. 15	·1126					
		17. 54	·1122					
		18. 9	·1116					
		18. 22	·1114					
		18. 39	·1115					
		19. 0	·1116					
		20. 2	·1109					
		20. 41	·1110					
		22. 2	·1110					
		22. 30	·1108					
		22. 50	·1110					
		23. 34	·1110					
		23. 59	·1110					
June25		June25		June25		June25		
0. 0	21. 1. 10	0. 0	·1110	0. 0	·01945	0. 0	61 ·0	61 ·1
0. 45	1. 55	1. 6	·1117	1. 28	·01922	1. 0	61 ·3	61 ·5
2. 54	0. 50	1. 20	·1121	6. 1	·01644	2. 0	62 ·0	62 ·2
3. 18	21. 1. 0	1. 36	·1123	6. 24	·01628	3. 0	62 ·6	63 ·0
6. 15	20. 54. 10	1. 52	·1120	9. 8:	·01455	6. 0	64 ·0	64 ·8
7. 40	53. 30	2. 33	·1122	12. 1	·01586	9. 0	63 ·5	64 ·0
8. 12	54. 5	2. 45	·1126	16. 27	·02037	12. 0	62 ·8	63 ·5
9. 6	53. 0	2. 54	·1124	18. 13	·02179	18. 0	59 ·4	59 ·0
9. 24	53. 20	3. 44	·1126	20. 4	{·02254	21. 0	60 ·8	59 ·7
10. 37	52. 40	3. 56	·1130		{·02223	22. 0	61 ·4	60 ·1
10. 46	53. 10	4. 53	·1127	21. 59	·02142	23. 0	62 ·3	61 ·0
11. 10	51. 25	5. 53	·1138	23. 41	·02030			
	***	6. 21	·1138	23. 59	·02022			
12. 30	52. 55	6. 41	·1141					
13. 13	52. 30	7. 42	·1136					
14. 3	53. 0	8. 13	·1136					
14. 30	54. 20	8. 24	·1133					
16. 3	51. 10	8. 35	·1136					
19. 24	47. 50	9. 11	·1133					
21. 3	50. 50	9. 52	·1134					
22. 25	57. 15	10. 35	·1130					
22. 35	56. 45	11. 12	·1137					
23. 3	59. 10	12. 4	·1132					
23. 13	20. 58. 50	13. 30	·1133					
23. 59	21. 1. 10	14. 14	·1135					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
June25	
June26	
0. 0	21. 1. 20
1. 13	2. 0
2. 45	21. 0. 0
4. 26	20. 55. 20
6. 52	51. 50
10. 56	52. 30
14. 42	51. 15
17. 47	48. 0
19. 10	47. 10 ***
20. 32	45. 0
21. 23	46. 0
23. 59	58. 35
June27	
0. 0	20. 58. 40
1. 33	21. 1. 50 ***
2. 56	21. 1. 50 ***
5. 27	20. 55. 10 ***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
June25	
14. 54	·1138
14. 55	·1132
15. 23	·1133
16. 22	·1131
17. 31	·1125
17. 53	·1123
18. 32	·1112
19. 30	·1110
20. 57	·1100
21. 46	·1096
22. 17	·1098
23. 12	·1118
23. 59	·1113
June26	
0. 0	·1113
0. 53	·1122
2. 18	·1128
2. 52	·1127
3. 25	·1124
4. 37	·1127
5. 20	·1127
5. 55	·1132
6. 15	·1133
6. 22	·1136
6. 37	·1133
6. 51	·1135
7. 7	·1132
7. 53	·1128
8. 7	·1128
9. 0	·1124 ***
9. 34	·1126
10. 4	·1124
11. 10	·1124
11. 27	·1128
11. 55	·1124
12. 52	·1125
13. 29	·1127
14. 45	·1127
15. 3	·1128
16. 40	·1128
17. 26	·1126
18. 15	·1122
19. 10	·1115
19. 38	·1110
21. 8	·1111
22. 11:	·1107
23. 17	·1112
	(†)
June27	
	(†)
0. 32	·1128 ***
1. 28	·1132 ***
2. 13	·1138 ***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June26	
0. 0	·02022
2. 40	·01640
5. 22:	·01228
8. 10	·01022
8. 22	·01047
10. 27	·01060
13. 2	·01132
15. 19	·01290
17. 47	·01578
19. 23	·01730
20. 53	·01763
22. 21	·01852
23. 59	·01902
June27	
0. 0	·01902
0. 53	·01926
2. 45	·01827
4. 44	·01668
	·01716
7. 47	·01640

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
June26		
0. 0	63·0	62·0
1. 0	63·9	63·4
2. 0	65·1	64·9
3. 0	66·1	66·0
9. 0	67·6	67·4
21. 0	59·6	59·9
June27		
1. 0	60·4	60·2
3. 0	61·3	61·1
9. 0	61·5	62·0
21. 0	55·7	55·7

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
June27	
8. 9	20. 51. 0 ***
12. 12	52. 20
12. 15	54. 10 ***
15. 15	52. 0
19. 3	44. 10
20. 12	45. 0
23. 13	56. 40
23. 58	57. 30
	(†)
June28	
	(†)
0. 3	20. 57. 30
0. 58	20. 58. 0
1. 51	21. 0. 50
2. 49	1. 0
3. 10	21. 1. 45
3. 56	20. 59. 50
4. 27	21. 0. 10
7. 5	20. 56. 10
7. 55	57. 50 ***
10. 30	56. 15
11. 49	53. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
June27	
2. 46	·1140 ***
3. 10	·1137 ***
4. 22	·1138 ***
4. 37	·1136 ***
5. 26	·1136
5. 42	·1133
5. 52	·1136 ***
6. 49	·1130 ***
8. 43	·1128 ***
10. 45	·1132 ***
11. 5	·1134 ***
11. 45	·1133 ***
12. 59	·1137 ***
14. 40	·1138 ***
15. 36	·1142 ***
16. 50	·1139 ***
17. 45	·1137 ***
19. 0	·1125 ***
19. 53	·1122 ***
21. 15	·1109 ***
22. 0	·1106 ***
23. 3	·1112 ***
23. 59	·1126
June28	
0. 0	·1126
0. 32	·1133
0. 48	·1131
1. 2	·1137
1. 56	·1143
2. 16	·1148
2. 38	·1145
3. 8	·1153
3. 38	·1149 ***
4. 15	·1150
4. 29	·1154 ***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June27	
11. 30:	·01737
14. 42	·01988
17. 1	·02266
	·02225
18. 24	·02194
19. 21	·02097
22. 11	·01880
22. 56	·01818
23. 59	·01780
June28	
0. 0	·01780
1. 28	·01733
4. 47	·01468
7. 19	·01294
10. 31:	·01165
14. 19	·01330
16. 56	·01570
18. 58	·01786
20. 29	·01871
21. 32	·01888
23. 59	·01744

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
June 8		
1. 0	58·3	58·1
3. 0	59·9	59·9
9. 0	61·5	62·0
22. 17	57·6	57·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June28		June28						
h m	° ′ ″	h m		h m		h m	°	°
12. 25	20. 53. 10	5. 12	·1152					
13. 34	51. 0	5. 30	·1154					
13. 44	52. 10	5. 52	·1151					
14. 15	50. 50	6. 17	·1156					
14. 22	51. 30	6. 30	·1152					
	***		***					
15. 24	47. 15	8. 30	·1158					
15. 51	47. 0	8. 38	·1165					
15. 57	43. 10	8. 49	·1159					
	***	9. 8	·1165					
16. 36	44. 10	9. 19	·1159					
16. 58	42. 50		***					
17. 10	40. 25	10. 33	·1164					
18. 8	42. 10	10. 57	·1157					
18. 35	38. 10	11. 13	·1156					
19. 12	39. 50	11. 23	·1159					
19. 15	41. 50	11. 39	·1154					
19. 45	38. 15	12. 11	·1166					
20. 3	41. 0		***					
20. 12	39. 0	12. 30	·1160					
	**		***					
20. 24	40. 25	12. 50	·1159					
20. 49	40. 0	13. 23	·1149					
22. 28	44. 10		***					
22. 52	47. 0	14. 2	·1152					
22. 57	46. 20	14. 40	·1138					
23. 18	48. 45	15. 54	·1135					
23. 29	51. 0		***					
23. 47	51. 20	16. 47	·1140					
23. 55	54. 40	17. 10	·1136					
23. 59	54. 55		***					
		17. 34	·1138					
			***					
		18. 29	·1129					
		18. 51	·1133					
			***					
		19. 37	·1127					
		19. 50	·1129					
			***					
		20. 19	·1126					
		20. 30	·1128					
		21. 15	·1118					
		21. 35	·1120					
		21. 55	·1119					
		22. 16	·1123					
		22. 17	·1111					
		22. 34	·1108					
		22. 53	·1113					
		23. 0	·1115					
		23. 17	·1124					
		23. 22	·1119					
		23. 27	·1126					
		23. 32	·1120					
		23. 47	·1119					
		23. 59	·1122					
June29		June29		June29		June29		
0. 0	20. 54. 55	0. 0	·1122	0. 0	·01744	9. 0	64·7	64·4
0. 20	56. 10	0. 5	·1126	1. 26	·01590	21. 0	60·3	60·5

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June29		June29		June29				
h m	° ′ ″	h m		h m		h m	°	°
0. 32	20. 55. 15	0. 15	·1119	4. 40:	·01208			
1. 23	56. 40	0. 24	·1131	8. 2	·01053			
1. 56	56. 30	0. 35	·1111	10. 41	·01040			
2. 20	54. 35	0. 52	·1119	11. 9	·01058			
2. 56	55. 15	1. 16	·1117	12. 22	·01050			
3. 12	54. 50	1. 31	·1127	16. 45	·01272			
3. 35	55. 40	1. 37	·1126	18. 30	·01304			
5. 9	51. 20	1. 45	·1128	21. 23	·01430			
6. 32	50. 0	2. 0	·1124	22. 39	·01424			
8. 0	47. 0	2. 17	·1106		(†)			
10. 10	46. 55	3. 2	·1127					
11. 40	45. 55	3. 19	·1124					
12. 3	47. 40	3. 51	·1127					
13. 2	45. 45		***					
14. 19	47. 5	4. 38	·1118					
15. 6	46. 20	4. 49	·1121					
15. 55	44. 0	5. 7	·1115					
16. 25	45. 30	5. 17	·1115					
17. 5	44. 40	5. 24	·1122					
17. 39	46. 0	5. 38	·1119					
18. 20	43. 0	6. 0	·1123					
18. 35	43. 0	6. 13	·1122					
19. 42	39. 0	6. 37	·1125					
20. 42	41. 15	6. 54	·1121					
21. 21	40. 0	7. 8	·1121					
21. 47	43. 10	7. 40	·1127					
22. 59	46. 20	8. 7	·1121					
23. 17	48. 10	8. 45	·1120					
23. 28	47. 35	8. 53	·1121					
	(†)	10. 46	·1117					
		11. 36:	·1136					
		12. 25	·1118					
		12. 35	·1118					
		13. 26	·1115					
		14. 1	·1115					
		14. 47	·1119					
		15. 16	·1119					
		16. 26	·1115					
		16. 45	·1115					
		17. 0	·1112					
		17. 15	·1114					
		17. 45:	·1123					
		18. 10	·1116					
		18. 45	·1114					
		19. 24	·1108					
		19. 44	·1106					
		20. 28	·1097					
		21. 10	·1092					
		21. 45	·1091					
		22. 7	·1088					
		22. 29	·1092					
		23. 47	·1118					
		23. 59	·1114					
June30		June30		June30		June30		
	(†)	0. 0	·1114	0. 0	·01442	1. 0	61·0	61·0
1. 0	20. 51. 28*	0. 19	·1109	1. 50	·01417	3. 0	62·1	62·1
1. 46	51. 20	0. 32	·1109	3. 6	·01286	9. 0	64·0	64·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 30		June 30		June 30		June 30		
h m	° ′ ″	h m		h m		h	°	°
2. 23	20. 53. 0	0. 49	·1122	6. 19	·01050	21. 0	58·9	59·0
3. 33	51. 30	2. 14	·1138		·01098			
4. 12	52. 0	2. 40	·1140	6. 51	·01057			
5. 23	50. 35	3. 0	·1132		·01104			
8. 10	49. 30		(†)	7. 21	·01062			
8. 43	51. 10	5. 48	·1110		·01103			
	(†)	6. 15	·1118	7. 58	·01064			
9. 0	51. 15	6. 37	·1121		·01102			
10. 49	52. 10	7. 25	·1110	8. 34	·01060			
12. 22	52. 15	7. 39	·1113		·01100			
	(†)		(†)	10. 12	·01066			
15. 44	50. 20	9. 0	·1109	11. 47	·01107			
16. 30	48. 10	9. 27	·1106	13. 17	·01222			
16. 59	49. 30	10. 33	·1106	17. 12	·01694			
18. 48	45. 15	11. 4	·1116	20. 21	·01832			
19. 0	46. 45	11. 42	·1105	20. 29	·01818			
19. 29	46. 0	12. 4	·1109	20. 42	·01816			
19. 45	46. 30	12. 33	·1107		·01397			
20. 16	45. 30	12. 44	·1108	22. 47	·01300			
21. 30	47. 0		(†)		(†)			
22. 27	46. 35	16. 22	·1104					
22. 48	47. 30	16. 57	·1109					
	(†)	18. 2	·1104					
23. 56	49. 0	19. 8	·1095					
23. 59	49. 10	20. 17	·1086					
			(†)					
		21. 0	·1088					
		21. 56	·1088					
		22. 15	·1078					
		22. 49	·1092					
			(†)					
July 1		July 1		July 1		July 1		
0. 0	20. 49. 15		(†)	0. 0	·01272	1. 0	61·5	62·0
0. 25	51. 0	0. 20	·1085	1. 20	·01217	3. 0	63·0	63·5
0. 50	51. 10	0. 32	·1080	2. 37	·01205	9. 0	65·5	65·7
1. 5	52. 0	0. 49	·1085	7. 48	·00826	21. 0	60·9	60·1
1. 30	51. 10	1. 13	·1084	10. 14	·00770	22. 0	61·4	61·5
1. 52	51. 50	1. 41	·1100	11. 55	·00794	23. 0	61·9	62·0
3. 3	51. 0	2. 2	·1105	13. 53	·00898			
4. 3	51. 30	2. 19	·1102	14. 8	·00930			
	***		***	15. 40	·01000			
6. 25	46. 10	2. 38	·1104	18. 9	·01216			
	***	2. 50	·1099	20. 37	·01335			
7. 11	48. 0	3. 18	·1100	22. 0	·01264			
	***		***		·01238			
9. 0	45. 30	3. 53	·1110	23. 59	·01210			
	***	4. 55	·1112					
10. 13	47. 0	5. 8	·1108					
	***	5. 18	·1112					
10. 27	45. 0	5. 45	·1098					
	***	6. 23	·1104					
10. 58	45. 15	6. 47	·1100					
11. 11	42. 50		***					
	***	7. 52	·1124					
12. 0	44. 10		***					
12. 57	44. 30	8. 32	·1110					
	(†)		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 1		July 1						
h m	° ′ ″	h m		h		h m	°	°
14. 30	20. 45. 0	9. 35	·1098					
14. 52	46. 10	9. 47	·1103					
	***		***					
15. 26	44. 0	10. 13	·1106					
	***	10. 22	·1102					
16. 1	44. 15	10. 30	·1108					
16. 31	41. 40	11. 2	·1099					
16. 55	43. 10	11. 25	·1114					
17. 58	41. 50	12. 7	·1104					
18. 42	42. 0	13. 4	·1101					
18. 55	40. 40	13. 21	·1106					
19. 52	42. 0	13. 54	·1094					
20. 7	41. 10	14. 13	·1105					
21. 23	43. 50	14. 45	·1104					
21. 45	47. 5	15. 26	·1099					
22. 17	47. 45	15. 57	·1089					
23. 44	53. 0	16. 30	·1096					
23. 45	52. 10	16. 58	·1098					
23. 59	53. 30	17. 27	·1094					
		18. 22	·1094					
		19. 0	·1088					
		20. 25	·1088					
		21. 5	·1083					
		21. 30	·1083					
		22. 1	·1076					
		22. 40	·1084					
		22. 57	·1080					
		23. 48	·1084					
			(†)					
July 2		July 2		July 2		July 2		
0. 0	20. 53. 35		(†)	0. 0	·01210	0. 0	62·3	62·2
0. 43	53. 20	0. 17	·1086	0. 39	·01218	1. 0	62·7	63·0
1. 0	54. 10	0. 30	·1086		·01187	2. 0	63·5	63·9
1. 26	53. 15	1. 0	·1077	1. 40	·01140	3. 0	64·1	64·4
1. 45	56. 0	1. 17	·1089	2. 55	·01022	6. 0	64·7	65·0
2. 3	54. 50	1. 37	·1090	5. 16	·00910	9. 0	63·1	64·0
2. 30	57. 25	2. 12	·1106	5. 44	·00843	12. 0	61·5	62·5
3. 35	57. 10	2. 30	·1102	9. 50	·00762	18. 0	56·5	57·0
4. 55	53. 0		(†)	14. 2	·01078	21. 0	58·2	58·0
5. 18	48. 35	3. 0	·1124*	16. 23	·01308	22. 0	58·5	58·2
5. 51	53. 10	3. 12	·1124	19. 13	·01527	23. 0	59·1	59·0
	***	3. 23	·1128		·01537			
6. 52	52. 10	3. 42	·1118	21. 8	·01055			
7. 30	53. 10	4. 10	·1128	23. 9	·01010			
8. 0	51. 55	4. 23	·1124		(†)			
	***	4. 37	·1130					
8. 37	52. 55	5. 11	·1126					
9. 3	52. 5	5. 39	·1158					
9. 45	54. 50	6. 7	·1126					
10. 6	52. 50	6. 32	·1120					
11. 27	51. 0	7. 29	·1125					
11. 50	53. 0		***					
12. 15	50. 45	8. 17	·1108					
12. 59	54. 0	8. 28	·1120					
13. 29	52. 30		***					
15. 15	52. 10	8. 53	·1108					
15. 57	49. 40	9. 4	·1110					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 2		July 2						
h m	° ′ ″	h m		h m		h m	°	°
16. 57	20. 51. 35	9. 23	·1105					
18. 37	46. 10	9. 40	·1110					
20. 28	47. 0	10. 4	·1108					
23. 30	57. 10	10. 19	·1112					
23. 53	56. 55	10. 32	·1108					
23. 59	56. 0	11. 51	·1107					
		12. 19	·1116					
		13. 0	·1114					
			***					
		15. 10	·1113					
		15. 45	·1115					
		16. 24	·1110					
		17. 37	·1115					
		18. 22	·1107					
		19. 30	·1102					
		20. 53	·1093					
		22. 40	·1095					
		22. 54	·1093					
		23. 52	·1100					
		23. 59	·1098					
July 3		July 3		July 3		July 3		
0. 0	20. 56. 0	0. 0	·1098	0. 0	·00918	0. 0	59 ·5	59 ·3
0. 32	56. 10	0. 36	·1102	4. 35	·00720	1. 0	60 ·0	60 ·2
0. 37	57. 55	1. 23	·1105	10. 6:	·00580	2. 0	61 ·0	60 ·9
1. 33	57. 35	1. 50	·1111	16. 59	·00922	3. 0	62 ·0	61 ·6
2. 13	56. 10	2. 7	·1110		·00866	9. 0	63 ·5	64 ·0
3. 9	55. 10	2. 30	·1116	17. 45	·00890	21. 0	57 ·5	57 ·8
3. 50	57. 0	3. 13	·1115	17. 59	·00868			
5. 0	54. 10	3. 30	·1118	18. 30	·00902			
5. 14	54. 20	3. 58:	·1134	18. 42	·00885			
6. 28	52. 0	4. 15	·1124	19. 13	·00907			
7. 28	51. 10	4. 22	·1124	19. 24	·00890			
8. 20	52. 10	4. 40	·1109	19. 52	·00906			
8. 30	51. 40	5. 2	·1116	20. 5	·00878			
15. 43	49. 45	5. 8	·1112	20. 40	·00892			
17. 37	47. 0	5. 28	·1116	20. 50	·00862			
17. 50	47. 50	5. 33	·1116	21. 37	·00874			
18. 8	46. 50	6. 48	·1123	21. 48	·00855			
20. 30	46. 10		***	22. 23	·00838			
21. 4	45. 10	7. 23	·1120	22. 55	·00762			
23. 5	46. 5	7. 34	·1123	23. 59	·00720			
23. 53	48. 20		**					
23. 59	47. 50	8. 47	·1118					
		10. 34	·1118					
		11. 10	·1125					
		13. 24	·1122					
		14. 25	·1120					
		16. 11	·1123					
		16. 56	·1123					
		17. 33	·1119					
		18. 37	·1110					
		19. 40	·1108					
		21. 0	·1114					
		21. 56	·1112					
		22. 30	·1108					
		22. 52	·1108					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 4		July 4		July 4		July 4		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 47. 50		(†)	0. 0	·00720	1. 0	61 ·5	61 ·2
0. 30	48. 40	0. 4	·1098	0. 22	·00710	3. 0	63 ·8	64 ·0
1. 52	54. 40	0. 41	·1103		·00676	9. 0	66 ·2	66 ·0
3. 22	57. 0	0. 50	·1106	1. 6	·00628	21. 0	60 ·7	61 ·0
3. 30	56. 10	1. 9	·1111	3. 12	·00342			
4. 46	56. 50	2. 3	·1114	4. 38	·00164			
5. 0	56. 0	2. 17	·1112	5. 31	·00298			
5. 15	56. 10	2. 45	·1116		***			
	***	3. 20	·1117	8. 13	·00597			
6. 30	54. 30	3. 49	·1110	12. 22:	·00700			
7. 3	55. 10	4. 39	·1118	16. 1	·00938			
11. 45	54. 30	5. 9	·1110	19. 53:	·01177			
12. 12	53. 10	5. 21	·1116	23. 13	·01220			
12. 45	56. 0	5. 30	·1112		(†)			
12. 53	55. 0	5. 36	·1118					
13. 0	55. 0	5. 45	·1115					
13. 30	53. 0	6. 6	·1117					
15. 3	52. 45	6. 31	·1112					
17. 20	52. 0	6. 45	·1116					
19. 26	48. 0	7. 7	·1115					
20. 28	47. 40	7. 15	·1110					
20. 42	48. 10	7. 31	·1111					
21. 36	48. 0	8. 19	·1106					
22. 43	51. 25		***					
23. 54	52. 15	9. 9	·1106					
	(†)	9. 30	·1109					
		10. 30	·1108					
		10. 49	·1112					
		11. 0	·1109					
		11. 32	·1110					
		12. 15	·1108					
		13. 4	·1113					
		13. 37	·1111					
		14. 45	·1108					
		16. 23	·1111					
		17. 15	·1110					
		17. 53	·1107					
		19. 40	·1100					
		21. 5	·1092					
		22. 49	·1095					
		23. 0	·1111					
		23. 47	·1100					
			(†)					
July 5		July 5		July 5		July 5		
	(†)		(†)		(†)	1. 0	63 ·4	63 ·0
0. 4	20. 52. 0	0. 8	·1095	0. 15	·01203	3. 0	65 ·4	65 ·0
0. 26	52. 10	0. 39	·1095	1. 28	·01180	9. 0	68 ·7	68 ·5
0. 37	52. 50	0. 45	·1109	3. 31	·01066	22. 27	63 ·5	64 ·0
0. 57	52. 50		***	3. 59	·01057			
1. 8	53. 45	1. 2	·1107	5. 31	·00920			
1. 41	53. 0	1. 5	·1116	5. 56	·00917			
1. 50	53. 30	1. 22	·1097	6. 13	·00865			
3. 28	51. 50		***	6. 21	·00863			
3. 47	53. 10	2. 4	·1098	6. 26	·00840			
4. 27	53. 30		***	7. 0	·00837			
4. 37	52. 45	2. 13	·1106	7. 17	·00798			
4. 57	53. 50	2. 16	·1095	7. 35	·00814			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 5		July 5		July 5		h m	°	°
h m	° ′ ″	h m		h m				
5. 13	20. 53. 20	2. 22	·1108	7. 46	·00712			
5. 26	54. 10	2. 23	·1096	8. 0	·00638			
5. 48	58. 10	2. 30	·1102	8. 14	·00762			
5. 53	57. 30	2. 48	·1115	8. 22	·00486			
5. 59	57. 40	2. 58	·1115	8. 27	·00470			
6. 30:	52. 10		***	8. 34	·00438			
6. 45	55. 0	3. 15	·1142	8. 40	·00487			
7. 7	39. 25	3. 33	·1114	8. 46	·00483			
7. 28	55. 20		***	8. 49	·00524			
7. 44	37. 40	4. 17	·1129	8. 57	·00492			
7. 48	41. 0	5. 15	·1126	9. 1	·00520			
7. 57	40. 20	5. 25	·1154	9. 15	·00502			
8. 15	57. 30	5. 32	·1154		·00563			
8. 37	44. 0	5. 45	·1205	9. 44	·00542			
8. 44	49. 5	5. 55	·1209	10. 8	·00635			
8. 52	47. 45	6. 0	·1196	10. 29	·00657			
9. 8	51. 0	6. 6	·1206	10. 37	·00698			
9. 20	48. 0	6. 16	·1174	10. 54	·00692			
9. 26	48. 55	6. 25	·1157	11. 16	·00365			
9. 34	47. 10	6. 33	·1157	11. 19	·00382			
9. 44	50. 40	6. 40	·1146	11. 23	·00344			
10. 8	44. 15	6. 44	·1180	11. 30	·00583			
10. 14	44. 30	7. 8	·1147	11. 39	·00690			
10. 21	43. 15	7. 20	·1193	11. 57	·00688			
10. 29	46. 20	7. 41	·1105	12. 8	·00776			
10. 48	37. 0	7. 47	·1162	12. 12	·00798			
11. 0	23. 0	7. 55	·1117	16. 51	·01254			
11. 15	48. 15	8. 10	·1148	18. 14	·01268			
11. 30	34. 50	8. 12	·1141	18. 23	·01287			
11. 42	44. 20	8. 17	·1148	21. 49	·01443			
11. 55	48. 25	8. 24	·1123	22. 15	·01492			
12. 4	45. 10	8. 25	·1130	22. 42	·01498			
12. 13	48. 45	8. 37	·1110	23. 59	·01539			
12. 22	47. 0	8. 43	·1135					
12. 34	49. 20	8. 48	·1120					
12. 44	46. 30	8. 58	·1125					
12. 53	50. 30	9. 17	·1087					
12. 57	47. 45	9. 24	·1089					
13. 33	48. 50	9. 30	·1063					
13. 54	48. 30	9. 38	·1084					
14. 3	46. 0	9. 52	·1075					
14. 16	48. 0	9. 56	·1076					
14. 34	46. 10	10. 3	·1071					
14. 45	48. 0	10. 9	·1073					
	***	10. 20	·1062					
16. 58	46. 0	10. 25	·1067					
	***	10. 38	·1080					
17. 45	51. 30	10. 45	·1086					
	***	10. 52	·1097					
18. 15	47. 15	11. 0	·1082					
18. 27	50. 0	11. 11	·1129					
	***	11. 24	·1094					
18. 47	51. 0	11. 38	·1102					
	***	11. 40	·1099					
19. 22	50. 0	11. 48	·1100					
19. 37	51. 10	12. 3	·1078					
	***	12. 14	·1099					
20. 56	46. 0	12. 23	·1087					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 5		July 5				h m	°	°
h m	° ′ ″	h m						
21. 27	20. 47. 5	12. 31	·1096					
21. 41	49. 30	12. 48	·1083					
	***	12. 56	·1095					
23. 11	52. 45	13. 4	·1080					
23. 15	52. 30	13. 18	·1086					
23. 59	52. 50		***					
		13. 47	·1080					
			***					
		14. 0	·1082					
			***					
		14. 22	·1081					
			***					
		14. 35	·1086					
			***					
		16. 14	·1089					
			***					
		16. 32	·1079					
			***					
		17. 14	·1067					
			***					
		17. 32	·1077					
			***					
		17. 45	·1074					
			***					
		18. 22	·1088					
			***					
		18. 58	·1060					
			***					
		19. 21	·1053					
			***					
		19. 38	·1054					
			***					
		20. 59	·1043					
			***					
		21. 34	·1054					
			***					
		21. 50	·1050					
			***					
		22. 17	·1065					
			***					
		22. 29	·1063					
			***					
		22. 52	·1065					
		23. 1	·1077					
		23. 10	·1080					
		23. 45	·1081					
			***					
		23. 59	·1080					
July 6		July 6		July 6		July 6		
0. 0	20. 52. 50	0. 0	·1080	0. 0	·01539	9. 0	67·0	66·4
0. 35	53. 50	0. 6	·1080	0. 47	·01540	21. 0	61·4	61·1
0. 44	54. 50	0. 13	·1084	2. 26	·01560			
1. 19	54. 25		***	8. 39:	·01684			
1. 35	56. 10	0. 30	·1083	14. 28	·01412			
1. 45	55. 0		***	20. 8	·01760			
1. 56	55. 5	1. 15	·1077	20. 16	·01775			
2. 21	52. 30	1. 39	·1081	22. 41	·01832			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 6		July 6		July 6				
h m	° ′ ″	h m		h m		h m	°	°
3. 55	20. 53. 10	1. 52	·1071	23. 59	·01754			
4. 57	52. 45	2. 11	·1082					
5. 52	53. 5		***					
6. 2	53. 50	2. 26	·1080					
9. 39	55. 0		***					
9. 45	54. 20	2. 55	·1084					
9. 56	55. 0		***					
11. 54	52. 30	3. 33	·1077					
14. 48	51. 5		***					
15. 23	53. 30	4. 1	·1089					
17. 22	47. 45		***					
17. 33	48. 0	4. 13	·1086					
17. 52	47. 15		***					
18. 42	50. 50	5. 3	·1102					
19. 3	48. 50		***					
20. 12	48. 55	5. 44	·1100					
20. 30	50. 10		***					
21. 21	47. 0	6. 9	·1109					
21. 48	46. 55		***					
22. 8	49. 15	6. 25	·1107					
22. 14	49. 10		***					
22. 45	54. 5	6. 58	·1110					
23. 14	53. 15		***					
23. 59	57. 0	7. 37	·1104					
			***					
		8. 4	·1109					
			***					
		8. 46	·1104					
		9. 1	·1107					
			***					
		9. 30	·1109					
			***					
		9. 45	·1105					
			***					
		10. 23	·1098					
			***					
		10. 51	·1103					
			***					
		11. 4	·1099					
			***					
		11. 30	·1099					
			***					
		11. 48	·1103					
			***					
		13. 30	·1099					
			***					
		14. 54	·1104					
			***					
		15. 22	·1097					
			***					
		17. 13:	·1103					
			***					
		19. 0	·1087					
			***					
		19. 11	·1087					
			***					
		20. 11	·1063					
		20. 28	·1078					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		July 6						
h m	° ′ ″	h m		h m		h m	°	°
		20. 32	·1076					
		20. 51	·1101					
		20. 59	·1098					
		21. 38	·1102					
		21. 58	·1094					
		22. 22	·1087					
			***					
		22. 50	·1104					
		22. 59	·1098					
		23. 47	·1121					
		23. 59	·1117					
July 7		July 7		July 7		July 7		
0. 0	20. 57. 0	0. 0	·1117	0. 0	·01754	1. 0	63·9	63·3
0. 15	54. 50	0. 15	·1116	1. 31	{·01740	3. 0	64·5	63·7
1. 1	56. 45	0. 24	·1126		{·01678	9. 0	65·0	65·0
1. 23	56. 55	1. 20	·1108	2. 31	·01680	21. 0	61·9	61·1
1. 32	59. 50	1. 22	·1114	3. 13	·01738			
1. 51	59. 50	1. 23	·1102	4. 1	·01733			
2. 5	58. 20	1. 51	·1116	4. 6	·01756			
2. 21	58. 50		***	4. 14	·01730			
2. 43	56. 50	2. 7	·1111	5. 18	·01722			
2. 57	57. 30		***	6. 54	·01654			
3. 17	55. 10	2. 28	·1117	8. 7	·01554			
3. 21	55. 30		***	11. 50	·01520			
4. 3	55. 5	2. 45	·1116	13. 25	·01588			
4. 15	58. 35	3. 4	·1128	14. 8	·01533			
4. 28	58. 30	3. 15	·1115	14. 48	·01517			
5. 0	54. 30	3. 32	·1132	15. 24	{·01552			
5. 3	56. 55	3. 37	·1128		{·01503			
5. 16	54. 45	4. 13	·1127	16. 37	{·01596			
5. 27	54. 45	4. 22	·1157		{·01550			
5. 36	54. 10	4. 33	·1145	17. 54	{·01658			
5. 43	55. 5	4. 41	·1157		{·01611			
6. 7	51. 45		***	19. 31	{·01704			
6. 13	51. 40	4. 59	·1160		{·01658			
6. 36	47. 50	5. 6	·1156	21. 40	{·01677			
6. 47	48. 30	5. 10	·1163		{·01628			
7. 0	48. 10	5. 20	·1153	23. 5	·01597			
7. 15	50. 0	5. 23	·1163	23. 59	·01540			
7. 20	51. 40	5. 31	·1156					
7. 42	53. 15	5. 39	·1164					
	″	5. 46	·1154					
9. 47	53. 10	5. 54	·1155					
10. 3	51. 45	6. 0	·1160					
10. 21	20. 40. 0	6. 17	·1138					
10. 49	21. 2. 10	6. 22	·1144					
11. 23	20. 40. 10	6. 41	·1126					
11. 41	35. 5	6. 47	·1128					
11. 52	36. 55	7. 1	·1114					
11. 59	35. 50		***					
12. 34	44. 50	7. 12	·1112					
12. 52	42. 30	7. 30	·1119					
13. 34	58. 35	7. 41	·1112					
14. 50	40. 50	7. 55	·1116					
15. 11	40. 30	9. 4	·1111					
15. 34	44. 30	10. 0	·1125					
15. 45	43. 55	10. 15	·1100					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 7		July 7						
h m	° ′ ″	h m		h m		h m	°	°
15. 57	20. 44. 40	10. 25	·1116					
16. 15	48. 0	10. 32	·1099					
16. 27	47. 30		***					
16. 38	49. 20	10. 40	·1093					
17. 52	43. 15	11. 5	·1046					
19. 31	42. 50	11. 33	·1091					
20. 25	44. 20	11. 35	·1088					
21. 9	44. 10	11. 47	·1103					
21. 20	43. 15	12. 2	·1092					
21. 50	43. 50	12. 25	·1103					
23. 50	49. 20	12. 42	·1114					
23. 58	48. 10	12. 48	·1108					
23. 59	48. 25	13. 3	·1108					
		13. 10	·1111					
		13. 34	·1089					
		13. 58	·1116					
		13. 59	·1113					
		14. 13	·1122					
		14. 22	·1120					
		14. 37	·1108					
		15. 7	·1112					
		15. 34	·1131					
		16. 32	·1100					
		16. 37	·1100					
		16. 52	·1088					
		17. 9	·1087					
		17. 26	·1097					
		17. 32	·1094					
		17. 46	·1102					
		18. 20	·1099					
		18. 49	·1088					
		19. 11	·1090					
		20. 14	·1085					
		20. 40	·1080					
		21. 39	·1080					
		22. 39	·1103					
		22. 56	·1103					
		23. 5	·1106					
		23. 52	·1113					
			(†)					
July 8		July 8		July 8		July 8		
0. 0	20. 48. 30		(†)	0. 0	·01540	1. 0	65 ·0	64 ·9
0. 51	49. 30	0. 12	·1111	0. 45	·01426	3. 0	67 ·3	67 ·4
1. 22	51. 15	0. 40	·1116	0. 51	·01428	9. 5	69 ·6	69 ·0
2. 0	51. 0	0. 58	·1112	0. 58	·01406	21. 0	62 ·4	61 ·9
2. 16	52. 20	1. 22	·1114	3. 34	·01020	22. 0	62 ·6	62 ·0
2. 27	51. 5	1. 52	·1110	3. 42	·01022	23. 0	62 ·9	62 ·7
2. 33	53. 20	1. 59	·1114	5. 6	·00818			
2. 49	51. 30	2. 2	·1106		·00915			
3. 3	52. 10	2. 7	·1122	5. 38	·00920			
3. 12	51. 50	2. 14	·1116	7. 8	·01130			
4. 32	54. 50	2. 20	·1121	8. 12	·01228			
5. 3	54. 20	2. 30	·1116	10. 28	·01226			
5. 13	55. 0	2. 38	·1130	11. 56	·01321			
5. 22	54. 10	2. 56	·1108	12. 18	·01308			
		3. 25	·1097	13. 2	·01402			
7. 49	54. 15	3. 40	·1110	13. 25	·01428			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 8		July 8		July 8				
h m	° ′ ″	h m		h m		h m	°	°
8. 0	20. 53. 0	3. 45	·1102	16. 39	·01876			
8. 9	54. 30	3. 51	·1116	18. 45	·02130			
8. 18	54. 10	4. 10	·1114	21. 30	·02228			
8. 29	55. 10	4. 18	·1128	21. 36	·02178			
8. 42	54. 0	4. 23	·1112	22. 7	·02192			
8. 48	54. 50	4. 40	·1121	22. 57	·02150			
9. 22	51. 0	4. 56	·1114		(†)			
9. 56	53. 0		***					
10. 30	49. 45	5. 17	·1126					
10. 57	51. 30	5. 30	·1111					
11. 34	51. 30	5. 52	·1116					
11. 44	49. 40	5. 56	·1130					
12. 3	54. 10	6. 5	·1102					
12. 44	45. 30	6. 14	·1108					
13. 0	49. 0	6. 17	·1104					
13. 35	49. 0	6. 30	·1114					
13. 43	47. 25	6. 42	·1110					
14. 20	47. 50	7. 2	·1106					
14. 27	48. 45	7. 30	·1110					
15. 20	48. 45	7. 44	·1108					
15. 38	47. 50	8. 10	·1120					
15. 49	47. 50	8. 54	·1103					
16. 18	49. 0	9. 8	·1109					
16. 29	48. 0	9. 18	·1105					
16. 40	49. 40	9. 38	·1111					
16. 54	48. 35	10. 6	·1110					
17. 16	48. 30	10. 26	·1105					
17. 30	49. 20	10. 44	·1109					
17. 42	47. 10	11. 2	·1105					
17. 48	48. 40	11. 21	·1107					
18. 15	46. 50	11. 33	·1102					
18. 25	47. 10	11. 55	·1129					
18. 36	45. 25	12. 18	·1112					
18. 49	50. 20	12. 37	·1122					
19. 17	51. 30	12. 48	·1116					
19. 30	55. 0	12. 57	·1123					
19. 58	52. 45	13. 28	·1103					
20. 7	53. 50		***					
20. 15	53. 0	14. 13	·1111					
20. 30	53. 10		***					
20. 45	54. 30	16. 21	·1113					
21. 39	49. 0		***					
21. 54	49. 0	16. 51	·1102					
22. 0	48. 0		***					
22. 12	49. 35	17. 40	·1098					
22. 20	48. 55		***					
23. 0	52. 0	18. 3	·1091					
23. 38	51. 15		***					
23. 45	52. 10	18. 32	·1088					
23. 59	51. 15		***					
		18. 47	·1094					
		19. 0	·1086					
		19. 23	·1058					
		19. 38	·1054					
		19. 49	·1060					
		20. 11	·1091					
		20. 20	·1092					
		20. 33	·1088					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	July 8 h m		h m		h m	°	°
		20. 50	·1096 ***					
		22. 0	·1100					
		22. 8	·1106					
		22. 18	·1102					
		22. 24	·1104					
		23. 16	·1081					
		23. 25	·1083 (†)					
July 9		July 9		July 9		July 9		
0. 0	20. 51. 20		(†)	0. 0	·01281	0. 0	63·4	63·1
0. 12	51. 10	0. 26	·1103	2. 7	·01272	1. 0	63·9	63·7
0. 30	52. 0	0. 32	·1102 ***	3. 44	·01200	2. 0	64·4	64·0
0. 45	50. 35			4. 21	·01198	3. 0	64·9	64·5
0. 56	52. 5	0. 55	·1102	4. 40	·01236	6. 0	65·3	64·9
1. 6	50. 30	1. 2	·1097	5. 34	·01203	9. 0	65·0	64·5
1. 18	52. 15	1. 11	·1112	5. 46	·01217	12. 0	64·7	64·8
2. 2	52. 10	1. 20	·1092	5. 59	·01188	21. 0	64·0	62·6
2. 24	53. 0	1. 34	·1110	9. 20	·01170	22. 0	64·2	62·9
2. 54	52. 30	2. 3	·1101	11. 18	·01185	23. 0	64·5	63·3
3. 3	53. 30	2. 24	·1110	12. 30	·01153			
3. 52	52. 10	2. 47	·1108 ***	12. 43	·01122			
4. 6	53. 0			13. 21	·01117			
4. 22	50. 35	3. 28	·1128	13. 38	·01125			
4. 28	50. 20	3. 33	·1120	14. 25	·01121			
4. 36	47. 0	3. 40	·1124	14. 47	·01140			
5. 8	50. 40	3. 54	·1103	15. 3	·01127			
5. 37	49. 50	4. 22	·1128	17. 58	·01328			
5. 45	50. 50	4. 37	·1112		·01230			
6. 4	48. 50	5. 0	·1148 ***	19. 50	·01292			
6. 30	49. 50			21. 6	·01305			
7. 3	46. 15	5. 47	·1120		·01337			
7. 6	46. 40	6. 1	·1126	22. 19	·01332			
7. 29	45. 30	6. 10	·1114	23. 8	·01298			
7. 41	46. 45	6. 52	·1134		(†)			
8. 27	47. 40	7. 30	·1119					
8. 35	46. 30	7. 37	·1128					
9. 12	47. 55	7. 50	·1124					
9. 38	45. 30	8. 15	·1124					
9. 59	46. 20	8. 28	·1120					
10. 18	45. 0	8. 49	·1124					
10. 58	49. 0	9. 17	·1116					
11. 15	49. 25	9. 37	·1120					
11. 28	48. 40	10. 4	·1118					
11. 41	48. 50	11. 12	·1123					
11. 50	45. 50	12. 4	·1120					
12. 11	46. 50	12. 30	·1129					
12. 23	46. 0	13. 8	·1113					
13. 0	48. 5	13. 22	·1113					
14. 24	44. 15	13. 43	·1122 ***					
14. 40	46. 0							
15. 5	44. 10	14. 18	·1106					
15. 44	46. 10	14. 52	·1126 ***					
16. 15	46. 10							
16. 37	44. 30 ***	15. 30	·1110					
		16. 6	·1114 ***					
18. 7	45. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 9 h m	° ′ ″	July 9 h m		h m		h m	°	°
18. 31	20. 45. 55	16. 33	·1108 ***					
19. 25	43. 0							
19. 33	43. 20	16. 49	·1106 ***					
19. 51	43. 5							
20. 35	47. 10	17. 44	·1106 ***					
20. 44	48. 10							
20. 57	47. 30	18. 7	·1109 ***					
21. 8	48. 45							
21. 32	49. 0	19. 15	·1086					
22. 3	47. 20	19. 24	·1086					
22. 30	49. 15	20. 7	·1066					
22. 43	49. 10	20. 37	·1056					
23. 0	52. 0	20. 59	·1058					
23. 16	51. 10	21. 32	·1084 ***					
23. 46	52. 50							
23. 59	52. 0	22. 0	·1086					
		22. 20	·1094 ***					
		22. 41	·1096					
		22. 55	·1103					
		23. 7	·1097 ***					
		23. 59	·1114					
July 10		July 10		July 10		July 10		
0. 0	20. 52. 0	0. 0	·1114		(†)	0. 0	64·5	63·4
0. 28	50. 0	0. 11	·1116	0. 50	·01262	1. 0	64·6	63·8
1. 16	53. 10	0. 20	·1116	1. 37	·01236	2. 0	64·9	64·3
2. 16	53. 40	0. 32	·1113	5. 4	·00980	3. 0	65·3	64·7
2. 30	52. 35	0. 53	·1124	6. 33	·00963	9. 0	62·7	63·8
2. 43	53. 10	1. 37	·1101 ***	7. 33	·00940	21. 0	53·5	54·4
3. 14	52. 0			8. 4	·00905			
4. 14	54. 35	2. 2	·1107	9. 53	·00977			
4. 44	54. 15	2. 17	·1090	12. 5	·01132			
4. 55	55. 0	2. 43	·1109	16. 1	·01557			
5. 11	53. 40	3. 2	·1108	18. 33	·01582			
5. 35	54. 10	3. 13	·1119	22. 7	·01643			
6. 0	52. 0	3. 27	·1111 ***		(†)			
6. 43	51. 15							
6. 57	52. 40	3. 58	·1126					
7. 30	52. 50	4. 7	·1114 ***					
8. 27	53. 5							
8. 56	51. 40	4. 47	·1132 ***					
9. 34	53. 15							
9. 57	51. 0	5. 0	·1120					
10. 32	52. 10	5. 3	·1128					
11. 42	47. 10	5. 15	·1116					
11. 53	58. 15	5. 35	·1125					
12. 11	46. 10	5. 45	·1120					
12. 30	48. 30	5. 54	·1134					
14. 0	50. 0	6. 1	·1124					
14. 30	46. 40	6. 31	·1146					
14. 53	49. 15	6. 47	·1130					
	(†)	6. 54	·1137					
16. 25	50. 45	7. 23	·1126 ***					
17. 1	48. 15							
17. 18	48. 25	8. 3	·1132					
17. 42	46. 20	8. 27	·1132					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 10		July 10						
h m	° ′ ″	h m		h m		h m	°	°
17. 50	20. 47. 0	8. 37	·1138					
18. 3	46. 0	8. 52	·1128					
18. 10	46. 10	9. 15	·1136					
18. 27	44. 40	9. 37	·1136					
19. 0	44. 0	9. 51	·1131					
19. 12	44. 55	10. 5	·1136					
21. 8	44. 40	10. 19	·1133					
21. 48	44. 10	10. 39	·1136					
23. 59	51. 5	11. 4	·1127					
		11. 19	·1134					
		11. 31	·1129					
		11. 37	·1132					
		11. 57	·1125					
		12. 15	·1141 ***					
		12. 46	·1128					
		13. 0	·1134 ***					
		13. 36	·1130 ***					
		14. 2	·1133					
		14. 37	·1124					
		15. 30	·1130 ***					
		16. 39	·1127 ***					
		17. 32	·1122 ***					
		19. 2	·1119 ***					
		19. 24	·1113 ***					
		19. 41	·1115 ***					
		19. 58	·1111 ***					
		20. 7	·1115 ***					
		20. 19	·1104					
		21. 7	·1100					
		21. 37	·1104					
		22. 2	·1115 ***					
		22. 25	·1114					
		22. 43	·1116					
		22. 58	·1126					
		23. 19	·1116					
		23. 34	·1126 (†)					
July 11		July 11		July 11		July 11		
0. 0	20. 51. 10		(†)		(†)	1. 0	56·9	56·8
1. 29	51. 5	0. 4	·1125	0. 44	·01488	3. 0	59·3	59·2
1. 48	48. 55	0. 21	·1126	2. 12	·01386	9. 0	62·5	62·5
2. 0	49. 50	0. 42	·1136	4. 14	·01170	21. 0	58·5	58·5
2. 25	49. 10	0. 56	·1125	6. 4	·00926			
2. 35	51. 0	1. 17	·1125	6. 23	·00898			
2. 52	51. 10	1. 23	·1128		·00866			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 11		July 11		July 11				
h m	° ′ ″	h m		h m		h m	°	°
3. 2	20. 52. 0	1. 36	·1122	7. 47	·00791			
3. 28	51. 0	1. 43	·1126	8. 41	·00875			
3. 51	52. 0	1. 47	·1122	11. 7	·00920			
4. 0	51. 10	1. 58	·1118	13. 41	·01010			
4. 23	51. 0	2. 0	·1120	15. 28	·01130			
4. 29	51. 10	2. 12	·1115	15. 58	·01142			
4. 42	50. 50		(†)	17. 8	·01238			
6. 25	52. 15	3. 0	·1140*		(†)			
6. 57	51. 40	3. 5	·1141	21. 0	·01468*			
7. 9	52. 10	3. 12	·1143	23. 14	·01392			
8. 5	53. 0	3. 17	·1141	23. 59	·01358			
8. 28	52. 30		(†)					
9. 22	54. 10	4. 12	·1126					
11. 25	54. 0	4. 33	·1117 ***					
11. 43	53. 0							
11. 59	54. 10	5. 45	·1131					
12. 19	53. 10	6. 4	·1126					
12. 34	54. 40	6. 15	·1134 ***					
13. 35	52. 0							
14. 45	52. 20	7. 15	·1132 ***					
15. 37	53. 10							
16. 15	51. 15	7. 46	·1128					
16. 35	51. 10	7. 59	·1132					
17. 28	48. 25	8. 14	·1125					
17. 47	49. 0	8. 34	·1129					
18. 24	47. 50	9. 11	·1123					
18. 35	48. 40	9. 22	·1127					
19. 7	48. 0	9. 32	·1123 ***					
19. 23	48. 25							
20. 13	47. 0	11. 9	·1123					
22. 0	49. 20	11. 47	·1120					
22. 15	48. 55	12. 22	·1127					
23. 19	51. 50	12. 45	·1120					
23. 59	51. 40	13. 1	·1123					
		13. 15	·1118					
		13. 34	·1117					
		13. 47	·1108 ***					
		14. 15	·1113 ***					
		14. 47	·1113					
		15. 29	·1114					
		15. 52	·1118					
		16. 15	·1112 ***					
		16. 55	·1108					
		17. 19	·1111 ***					
		17. 57	·1112 ***					
		19. 26	·1108 ***					
		20. 41	·1103					
		21. 23	·1098 ***					
		22. 2	·1102					
		23. 0	·1103 (†)					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
July 12 h m	° ′ ″
0. 0	20. 51. 40
0. 30	51. 10
0. 48	49. 10
1. 34	48. 0
2. 11	49. 15
2. 26	48. 40
3. 27	50. 10
3. 52	49. 10
6. 5	49. 0
6. 34	47. 50
7. 0	48. 50
7. 24	48. 30
	(†)
9. 0	48. 50*
21. 25	46. 39*
July 13	
8. 35	20. 56. 11*
21. 0	48. 57*
July 14	
	(†)
0. 30	20. 56. 30
1. 3	55. 10
1. 56	58. 55
2. 26	58. 20
2. 43	59. 20
3. 30	57. 50
3. 52	58. 50
4. 5	56. 45
	***
9. 1	55. 35
10. 35	58. 10
11. 44	54. 50
12. 12	51. 10
13. 18	54. 0
	***
16. 16	52. 0
16. 38	52. 50
17. 28	51. 0
17. 34	51. 45
17. 47	50. 50
18. 0	51. 10
18. 20	49. 40
18. 33	50. 0
18. 57	48. 10
19. 6	49. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 12 h m	
	(†)
1. 0	·1122
3. 0	·1123*
5. 24	·1142
5. 49	·1149
6. 40	·1140
6. 47	·1143
7. 7	·1135
7. 30	·1135
8. 3	·1128
8. 22	·1135
8. 37	·1136
8. 55	·1146
9. 29	·1132
9. 32	·1135
9. 53	·1131
10. 5	·1135
10. 14	·1133
10. 30	·1136
11. 3	·1127
11. 10	·1130
11. 43	·1129
12. 1	·1132
12. 29	·1126
	(†)
21. 25	·1094*
July 13	
8. 35	·1127*
21. 0	·1077*
July 14	
	(†)
1. 0	·1090*
1. 47	·1112
2. 8	·1107
2. 29	·1114
2. 46	·1131
2. 56	·1122
3. 11	·1122
3. 20	·1126
3. 32	·1120
3. 55	·1134
4. 5	·1124
4. 13	·1126
4. 30	·1106
	***
5. 37	·1122
5. 44	·1118
5. 52	·1122
6. 26	·1117
6. 59	·1127
7. 12	·1121
7. 30	·1119
7. 40	·1123
7. 47	·1118
8. 23	·1115
9. 2	·1117
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
July 12 h m	
0. 0	·01358
0. 53	·01330
3. 43	·00962
5. 59	·01050
8. 19	·01233
9. 37	·01214
10. 44	·01253
12. 42	·01371
	(†)
21. 25	·02095*
July 13	
8. 35	·01929*
21. 0	·01918*
July 14	
	(†)
1. 0	·01725*
1. 24	·01632
3. 15	·01418
3. 32	·01428
4. 13	·01364
	·01437
6. 26	·01511
	·01538
7. 5	·01504
8. 0	·01522
8. 7	·01538
8. 53	·01527
	·01603
9. 47	·01598
11. 30	·01676
11. 47	·01678
18. 13	·02482
	·02436
21. 27	·02402
	·02238
23. 59	·02092

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 12 h m	°	°
1. 0	61·8	61·4
3. 0	64·4	64·5
9. 0	66·4	66·3
21. 25	62·8	60·7
July 13		
8. 35	68·3	68·2
21. 0	65·9	63·3
July 14		
1. 0	68·9	67·5
3. 0	70·6	69·0
9. 0	70·0	69·0
21. 0	63·5	61·1

Greenwich Mean Solar Time.	Western Declination.
July 14 h m	° ′ ″
20. 2	20. 46. 50
21. 4	49. 0
21. 33	49. 10
21. 59	51. 0
22. 6	50. 50
22. 30	54. 10
23. 21	54. 5
23. 59	57. 40
July 15	
0. 0	20. 58. 0
0. 12	59. 10
0. 33	20. 59. 15
1. 2	21. 1. 10
1. 22	1. 10
1. 31	1. 50
1. 57	0. 35
3. 29	21. 0. 0
3. 39	20. 59. 0
5. 6	57. 10
5. 25	55. 25
6. 6	55. 10
7. 28	56. 35
8. 5	50. 30
8. 45	55. 0
10. 0	54. 40
10. 30	56. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 14 h m	
10. 19	·1123
10. 39	·1129
11. 28	·1128
11. 43	·1135
12. 6	·1122
	***
12. 35	·1120
	***
13. 10	·1123
13. 32	·1123
	***
14. 20	·1128
	***
15. 0	·1128
15. 7	·1124
	***
15. 40	·1123
15. 48	·1125
16. 3	·1121
16. 10	·1123
16. 15	·1121
	***
17. 4	·1122
	***
17. 30	·1117
17. 38	·1117
17. 56	·1110
18. 2	·1112
	***
19. 15:	·1092
	***
20. 25	·1092
21. 2	·1096
21. 20	·1103
21. 58	·1101
23. 6	·1105
23. 45	·1113
23. 52	·1111
23. 59	·1116
July 15	
0. 0	·1116
0. 6	·1114
0. 13	·1120
0. 30	·1112
	***
0. 59	·1118
1. 8	·1130
1. 22	·1124
1. 35	·1136
1. 47	·1124
1. 59	·1128
2. 10	·1126
2. 20	·1132
2. 45	·1124
2. 55	·1133
3. 42	·1119
4. 8	·1123

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 15	
0. 0	·02092
2. 51	·01830
4. 59	·01600
6. 41	·01467
7. 57	·01430
9. 0	·01438
	·01510
12. 12	·01650
12. 32	·01655
15. 54	·01948
18. 45	·02262
20. 13	·02334
	·02185
21. 9	·02179
	(†)
22. 59	·01557
23. 59	·01493

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 15		
1. 0	65·7	63·9
3. 0	66·5	65·0
9. 0	65·8	65·5
21. 0	60·8	60·0
22. 0	61·8	60·8
23. 0	62·4	61·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

July 13. The Photographic Traces for the three Magnetometers were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 15		July 15						
h m	° ′ ″	h m		h m		h m	°	°
10. 44	20. 55. 0	4. 19	·1121					
11. 15	56. 0	4. 36	·1123					
11. 30	55. 0		***					
11. 58	54. 5	5. 7	·1113					
12. 17	57. 0		***					
12. 47	54. 5	6. 0	·1122					
12. 50	54. 30	6. 11	·1125					
13. 0	53. 50	6. 39	·1123					
13. 9	54. 30	6. 47	·1126					
13. 26	52. 10	7. 2	·1126					
	***	7. 17	·1131					
14. 13	54. 0	7. 24	·1128					
	***	7. 34	·1132					
15. 3	53. 10	7. 54	·1125					
	***	8. 37	·1139					
16. 3	56. 50	9. 4	·1132					
17. 30	50. 30	9. 30	·1124					
19. 57	46. 55	10. 2	·1123					
21. 0	48. 10	10. 34	·1126					
22. 0	48. 15	10. 48	·1121					
22. 41	52. 0		***					
23. 4	52. 15	11. 34	·1126					
23. 59	56. 10	11. 50	·1124					
		12. 9	·1124					
		12. 21	·1128					
		12. 37	·1122					
		13. 12	·1122					
		13. 57	·1117					
			***					
		15. 5:	·1122					
			***					
		16. 0	·1115					
		16. 17	·1118					
		16. 33	·1118					
			***					
		17. 8	·1121					
			***					
		17. 56	·1122					
			***					
		18. 36	·1118					
		18. 43	·1116					
		19. 2	·1114					
		19. 11	·1110					
			***					
		19. 51	·1105					
			***					
		21. 2	·1095					
		21. 22	·1092					
			***					
		21. 55	·1089					
		22. 35	·1099					
			(†)					
July 16		July 16		July 16		July 16		
0. 0	20. 56. 15		(†)	0. 0	·01493	0. 0	62 ·9	62 ·3
0. 32	20. 59. 55	0. 28	·1108	2. 10	·01322	1. 0	63 ·7	63 ·0
0. 57	21. 0. 5		***	2. 35	·01314	2. 0	64 ·1	63 ·4
1. 19	20. 58. 50	0. 51	·1119	4. 7	·01210	3. 0	64 ·6	64 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 16		July 16		July 16		July 16		
h m	° ′ ″	h m		h m		h m	°	°
1. 33	20. 59. 45	1. 20:	·1107	4. 40	·01192	6. 0	65 ·2	65 ·1
1. 43	21. 1. 30	1. 43	·1118	8. 4	·01270	9. 0	64 ·1	64 ·3
		2. 3	·1118	10. 46	·01252	12. 0	62 ·3	63 ·0
2. 35	1. 45	2. 12	·1114	14. 27	·01410	18. 0	57 ·8	56 ·6
3. 8	0. 0	2. 19	·1120	15. 37	·01533	21. 0	60 ·0	58 ·3
3. 25	21. 0. 10	2. 24	·1120	16. 47	·01690	22. 0	60 ·6	58 ·8
4. 23	20. 58. 0	2. 39	·1129	16. 52	·01686	23. 0	61 ·6	60 ·0
4. 38	59. 30	3. 3	·1118	19. 6	·01967			
	***	3. 8	·1114	19. 12	·01958			
8. 0	53. 45	3. 29:	·1124	20. 11	·02054			
9. 14	54. 10	3. 44	·1121	21. 5	{·01991			
9. 29	52. 0	3. 58	·1127		{·01318			
9. 45	51. 30	4. 5	·1128	22. 54	·01294			
10. 0	53. 10	4. 33	·1141	23. 59	·01182			
10. 8	52. 55	4. 49	·1132					
10. 28	56. 0	5. 3	·1133					
11. 3	54. 15	5. 15	·1138					
11. 13	55. 0	5. 23	·1136					
11. 25	54. 25		***					
12. 28	55. 10	5. 47	·1144					
12. 35	56. 0	5. 57	·1141					
12. 58	54. 35	6. 52	·1134					
13. 26	56. 0	6. 57	·1137					
13. 45	58. 50	7. 15	·1132					
14. 25	53. 45	7. 24	·1126					
14. 56	53. 15	7. 32	·1131					
16. 34	50. 10	7. 47	·1129					
17. 12	50. 50	8. 4	·1138					
	***	8. 20	·1131					
17. 58	48. 50	8. 48	·1136					
18. 36	49. 0	9. 4	·1135					
18. 59	48. 30	9. 19	·1137					
19. 36	49. 50	9. 39	·1131					
19. 58	48. 40	9. 47	·1136					
21. 23	48. 50	10. 1	·1132					
21. 36	50. 0	10. 14	·1137					
21. 43	49. 0	10. 37	·1127					
23. 52	48. 25	10. 40	·1130					
23. 59	49. 0	10. 47	·1127					
		11. 5	·1134					
		11. 23	·1131					
		12. 26	·1130					
		12. 37	·1132					
		12. 45	·1126					
		13. 4	·1127					
		13. 28	·1121					
		13. 48	·1127					
		13. 55	·1127					
		14. 8	·1130					
		14. 30	·1126					
		15. 6	·1134					
		17. 17	·1128					
		17. 20	·1125					
		17. 39	·1125					
		17. 53	·1118					
		18. 0	·1121					
		18. 20	·1110					
		18. 29	·1109					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	July 16 h m		h m		h m	°	°
		18. 38	·1102					
		19. 13	·1099 ***					
		20. 17	·1100					
		20. 53	·1098					
		21. 15	·1099					
		21. 25	·1103					
		21. 32	·1100					
		21. 45	·1107					
		21. 54	·1104					
		21. 59	·1110					
		22. 17	·1106					
		22. 59	·1103					
		23. 43	·1120					
		23. 59	·1109					
July 17		July 17		July 17		July 17		
0. 0	20. 49. 0	0. 0	·1109	0. 0	·01182	0. 0	62 ·3	61 ·1
0. 22	50. 15	0. 22	·1113	3. 44	·00758	1. 0	63 ·3	62 ·3
0. 28	50. 0	0. 40	·1111	4. 59	·00938	2. 0	64 ·2	63 ·1
0. 32	51. 0	0. 47	·1116	6. 27	·01024	3. 0	65 ·0	64 ·0
0. 41	50. 10	1. 17	·1113 ***	10. 18:	·01093	9. 0	64 ·2	64 ·3
0. 45	51. 0			13. 55	·01338	21. 0	61 ·9	60 ·9
0. 55	51. 50	2. 5	·1123 ***	16. 29	·01517			
1. 15	51. 15			18. 31:	·01608			
1. 32	52. 50	2. 37	·1123	20. 26	·01541			
2. 48	54. 0	2. 52	·1125 ***	23. 18	·01448			
4. 0	54. 0			23. 59	·01370			
4. 45	53. 0	3. 12	·1124					
5. 31	53. 10	3. 30	·1126 ***					
6. 16	51. 30 ***							
		4. 25	·1126 ***					
12. 32	50. 0							
12. 45	49. 20	4. 52:	·1122 ***					
12. 57	49. 50							
13. 15	48. 50	5. 14	·1126 ***					
13. 22	49. 10							
13. 52	48. 10	5. 53	·1126 ***					
14. 8	48. 55							
14. 27	48. 0	6. 43	·1136 ***					
15. 9	49. 0							
15. 26	48. 30	6. 53	·1132 ***					
15. 33	49. 0							
16. 0	47. 30	7. 18	·1130 ***					
16. 17	48. 10 ***							
		7. 38	·1135					
17. 10	47. 35	8. 22	·1132					
17. 25	46. 15	8. 43	·1134					
17. 53	46. 55	9. 0	·1132					
19. 2	44. 10	9. 32	·1132					
19. 45	43. 35	9. 58	·1127 ***					
19. 57	42. 0							
20. 0	41. 55	11. 3	·1128					
20. 48	40. 0	11. 30	·1127 ***					
22. 53	47. 35							
23. 59	50. 30	11. 49	·1129					
		12. 14	·1126					
		12. 31	·1124					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	July 17 h m		h m		h m	°	°
		12. 37	·1127 ***					
		12. 58	·1123 ***					
		13. 32	·1122 ***					
		14. 39	·1122					
		14. 55	·1119 ***					
		15. 39	·1120					
		16. 7	·1117 ***					
		16. 25	·1116 ***					
		17. 10	·1108 ***					
		18. 58	·1112 ***					
		19. 52	·1110					
		20. 10	·1120 ***					
		21. 31	·1125					
		21. 47	·1121					
		22. 32	·1116					
		22. 51	·1120					
		23. 37	·1118					
		23. 53	·1114					
		23. 59	·1113					
July 18		July 18		July 18		July 18		
0. 0	20. 50. 40	0. 0	·1113 ***	0. 0	·01370	1. 0	65 ·2	64 ·3
0. 22	52. 30			2. 35	·01025	3. 0	66 ·5	66 ·1
0. 41	51. 30	0. 14	·1115 ***	2. 46	{·01037 ·01122	9. 0	67 ·0	67 ·3
1. 18	52. 10					21. 0	61 ·9	60 ·9
1. 33	50. 45	1. 3	·1106	4. 15	·01282			
2. 3	49. 10	1. 15	·1110	4. 23	{·01271 ·01322 ***			
2. 19	50. 0	1. 30	·1104					
2. 57	48. 0 ***	2. 1	·1104					
		2. 19	·1109	6. 37	{·01298 ·01352			
5. 15	48. 15 ***	3. 26	·1106					
		3. 35	·1107	7. 4	{·01316 ·01358			
8. 41	53. 10 ***	3. 43	·1104					
		3. 58	·1104	7. 51	{·01306 ·01362			
11. 48	52. 30 ***	4. 8	·1097					
		4. 35	·1099	10. 35:	·01377			
14. 59	53. 10	4. 47	·1096	12. 45	·01584			
18. 25	43. 20	5. 8	·1098	16. 14	·01968			
20. 4	40. 50	5. 19	·1096	18. 57	·02260			
20. 44	41. 0	5. 37	·1100	23. 59	·02038			
20. 56	40. 0	5. 49	·1096					
21. 46	44. 50	6. 14	·1098					
22. 0	44. 45	6. 44	·1098					
22. 46	47. 35	6. 45	·1095					
23. 59	53. 0	7. 37	·1094					
		8. 38	·1088					
		9. 54	·1087					
		10. 42	·1088					
		11. 19	·1092 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	July 18 h m		h m		h m	°	°
		13. 58	·1096					
		14. 47	·1097					
		16. 15	·1096					
		16. 46	·1100					
		17. 29	·1102					
		18. 49	·1103					
		19. 22	·1101					
		20. 32	·1091					
		20. 59	·1099					
		21. 32	·1097					
		21. 42	·1099					
		21. 52	·1096					
		22. 2	·1096					
		22. 36	·1097					
		22. 55	·1100					
		23. 29	·1101					
			(†)					
July 19		July 19		July 19		July 19		
0. 0	20. 53. 10		(†)	0. 0	·02038	1. 0	64 ·4	63 ·0
1. 4	54. 0	1. 0	·1098*	3. 43	·01937	3. 0	65 ·0	63 ·9
1. 55	52. 50	1. 32	·1102	7. 33	·01746	9. 0	66 ·8	66 ·3
2. 1	53. 30	1. 45	·1094	11. 12:	·01582	23. 40	65 ·0	64 ·0
2. 52	50. 30	2. 11	·1115	14. 30	·01749			
5. 15	48. 0	2. 40:	·1107	17. 42	·02065			
11. 46	48. 0	4. 11	·1114		·02028			
14. 46	47. 30	4. 54	·1112	20. 20	·02036			
14. 57	47. 0	5. 15	·1114	23. 59	·01934			
16. 30	46. 30	5. 47	·1109					
16. 42	45. 30	6. 0	·1112					
	***	6. 15	·1110					
19. 42	42. 10	7. 13	·1114					
	***	7. 30	·1117					
20. 29	43. 30	8. 4	·1118					
21. 35	43. 50	8. 17	·1125					
22. 35	47. 0	9. 38	·1125					
23. 59	48. 50	11. 17	·1126					
		11. 45	·1122					
		12. 2	·1125					
		12. 58	·1123					
		13. 2	·1125					
		13. 35	·1122					
		13. 57	·1123					
		14. 2	·1126					
		14. 25	·1123					
		14. 44	·1125					
		15. 10	·1122					
		16. 42	·1117					
		16. 56	·1119					
		17. 50	·1112					
		18. 1	·1113					
		18. 18	·1102					
		19. 7	·1097					
		20. 0	·1103					
		20. 24	·1104					
		20. 58	·1110					
		21. 52:	·1106					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	July 19 h m		h m		h m	°	°
		22. 16	·1108					
		22. 50	·1109					
		23. 59	·1114					
July 20		July 20		July 20		July 20		
0. 0	20. 48. 35	0. 0	·1114	0. 0	·01934	9. 15	69 ·0	69 ·0
0. 18	48. 10	0. 55	·1111	1. 0	·01835	21. 0	64 ·5	63 ·4
1. 15	51. 0	1. 11	·1115	1. 44	·01736			
1. 45	50. 10	1. 48	·1113	2. 26	·01650			
3. 54	51. 30	2. 12	·1119	4. 59	·01200			
4. 8	51. 5	2. 35	·1120	5. 16	·01143			
5. 4	52. 30	2. 49	·1116	5. 30	·01121			
6. 3	51. 55	3. 6	·1116		·01166			
6. 45	53. 10	3. 10	·1114	6. 24	·01252			
7. 38	52. 55	3. 30	·1117	6. 29	·01272			
8. 7	50. 0	3. 57	·1116	6. 45	·01248			
9. 39	53. 30	4. 11	·1109		·01302			
10. 37	54. 15	4. 46	·1117	7. 10	·01257			
11. 34	53. 30	5. 0	·1116		·01310			
13. 37	53. 10	5. 26	·1098	7. 39	·01272			
14. 0	56. 50	5. 48:	·1112		·01335			
14. 53	52. 35	6. 11	·1106	8. 13	·01286			
16. 14	51. 50	6. 56	·1119		·01350			
19. 18	47. 0	7. 29	·1102	9. 32	·01304			
20. 36	47. 0	8. 13	·1106	11. 35	·01354			
21. 54	51. 0	8. 32	·1104	13. 41	·01456			
23. 11	53. 30	8. 38	·1105	14. 1	·01463			
23. 59	56. 20	9. 14	·1101	19. 22	·01920			
		9. 45	·1103	21. 38	·01959			
		10. 9	·1106	23. 40	·01871			
		10. 49	·1109	23. 59	·01872			
		11. 29	·1106					
		12. 33	·1106					
		13. 25	·1108					
		13. 42	·1119					
		14. 3	·1113					
		16. 17	·1109					
		17. 13	·1111					
		17. 59	·1108					
		18. 30	·1100					
		19. 49	·1091					
		20. 51	·1089					
		21. 47	·1091					
		22. 35	·1100					
			(†)					
July 21		July 21		July 21		July 21		
0. 0	20. 56. 25		(†)	0. 0	·01872	1. 0	66 ·0	65 ·4
0. 33	57. 10	1. 0	·1113*	3. 15	·01618	3. 0	66 ·9	66 ·4
	(†)	1. 58	·1104		·01662	9. 0	67 ·0	67 ·0
1. 0	56. 29*	2. 33	·1106		***	21. 0	60 ·2	58 ·9
3. 0	57. 0	2. 47	·1102	7. 16	·01759			
3. 57	56. 55	2. 59	·1107		·01797			
	***	3. 4	·1102	11. 0:	·01900			
5. 28	54. 30	3. 20	·1107	14. 41	·02288			
	***	3. 33	·1106	16. 7	·02198			
6. 22	56. 0	3. 49	·1109	17. 38	·02020			
	***							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 21		July 21		July 21				
h m	° ′ ″	h m		h m		h m	°	°
6. 35	20. 55. 0	4. 59	·1109	18. 50	{·01850			
	***	5. 4	·1112		{·01398			
8. 2	56. 30	5. 12	·1109	20. 22	{·01403			
	***	5. 47	·1108		{·01362			
9. 1	55. 0	6. 3	·1112	21. 22	·01357			
	***	6. 26	·1111	22. 12	·01218			
10. 58	55. 55	6. 36	·1112	23. 59	·01064			
11. 50	53. 30	6. 47	·1106					
16. 13	50. 10	6. 55	·1114					
16. 20	46. 10	7. 0	·1112					
17. 49	45. 0	7. 7	·1113					
17. 57	43. 45	7. 17	·1102					
18. 3	44. 20	7. 32	·1104					
19. 12	42. 50	7. 44	·1111					
19. 15	43. 30	8. 16	·1103					
19. 29	42. 0	8. 46	·1103					
19. 49	44. 0	8. 59	·1104					
20. 29	43. 50	10. 7	·1106					
20. 39	44. 30	10. 24	·1108					
21. 51	44. 0	10. 34	·1107					
21. 55	43. 55	12. 38	·1107					
22. 6	43. 0	13. 9	·1108					
	***	13. 52	·1107					
23. 27	47. 15	14. 52	·1109					
23. 57	47. 0		***					
23. 59	47. 10	15. 22	·1109					
			***					
		16. 19	·1110					
			***					
		17. 15	·1110					
		17. 22	·1113					
		17. 32	·1110					
		17. 49	·1109					
			***					
		19. 27	·1092					
		19. 44	·1095					
		20. 37	·1092					
		21. 4	·1094					
		21. 30	·1092					
		21. 52	·1096					
		22. 0	·1090					
		22. 13	·1091					
		22. 28	·1099					
		22. 39	·1095					
		22. 59	·1105					
		23. 9	·1105					
		23. 17	·1100					
		23. 28	·1108					
		23. 35	·1104					
			***					
		23. 59	·1104					
July 22		July 22		July 22		July 2		
0. 0	20. 47. 10	0. 0	·1104	0. 0	·01064	1. 0	64·1	63·1
0. 9	47. 55	0. 5	·1108	1. 3	{·00950	3. 0	65·9	65·1
1. 9	47. 0	0. 13	·1102		{·00911	9. 0	66·3	66·7
1. 18	48. 0	0. 31	·1115	4. 31	·00564	21. 0	60·6	60·9
1. 44	48. 0	1. 0	·1112	7. 32:	·00450	22. 0	60·7	61·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 22		July 22		July 22		July 22		
h m	° ′ ″	h m		h m		h m	°	°
2. 6	20. 48. 30	1. 10	·1114	12. 12	·00562	23. 0	61·0	61·3
2. 14	42. 50	1. 31	·1111	12. 18	·00557			
2. 35	48. 0	1. 43	·1113	12. 25	·00582			
2. 45	49. 0	2. 10	·1114	12. 30	·00570			
3. 57	50. 20	2. 44	·1111	14. 57	·00744			
4. 24	49. 50	3. 8	·1114	17. 29	·00975			
4. 50	50. 35	3. 22	·1113	19. 22	·01062			
5. 30	50. 10	3. 52	·1115	19. 34	·01078			
6. 37	51. 30	4. 5	·1113	20. 28	{·01110			
7. 9	49. 0	4. 30:	·1103		{·01037			
7. 30	50. 0	4. 49	·1112	22. 35	{·01058			
8. 36	48. 35	4. 56	·1107		{·01016			
9. 45	50. 40	5. 26	·1106	23. 46	·01022			
11. 53	49. 0	5. 43	·1111		(†)			
12. 7	50. 0	5. 55	·1106					
12. 23	48. 15	6. 24	·1108					
12. 30	48. 45	6. 32	·1113					
12. 37	47. 10	6. 41	·1113					
13. 37	46. 15	7. 2	·1102					
13. 41	47. 0	7. 54	·1113					
13. 58	45. 15	8. 12	·1112					
14. 42	45. 15	8. 20	·1114					
14. 51	46. 0	8. 44	·1105					
15. 18	43. 40	9. 33	·1109					
	***	10. 1	·1109					
16. 27	43. 10	10. 39	·1114					
16. 33	45. 55		***					
16. 57	40. 25	11. 4	·1112					
17. 3	41. 40	11. 24	·1117					
17. 33	34. 25	11. 32	·1112					
17. 55	42. 55	11. 59	·1127					
18. 2	42. 55	12. 4	·1118					
18. 13	45. 25	12. 7	·1123					
18. 26	43. 25	12. 15	·1117					
18. 29	44. 0	12. 22	·1128					
18. 43	42. 30	12. 27	·1114					
18. 48	44. 20	12. 35	·1132					
18. 57	42. 0	12. 40	·1116					
19. 0	42. 55	12. 46	·1116					
19. 7	41. 15	12. 51	·1124					
19. 22	42. 50	12. 57	·1120					
19. 38	38. 45	13. 7	·1126					
19. 52	39. 15	13. 16	·1118					
20. 3	41. 55	13. 22	·1121					
20. 15	41. 5	13. 29	·1114					
20. 32	46. 10	13. 34	·1120					
20. 43	44. 0	14. 10:	·1113					
20. 48	45. 0	14. 56	·1123					
20. 57	43. 0		***					
21. 0	44. 30	15. 14	·1112					
21. 17	43. 15	15. 28	·1118					
	***		***					
22. 9	46. 20	16. 27	·1122					
22. 15	46. 0	16. 36	·1117					
22. 22	47. 30	17. 8	·1113					
22. 53	47. 10	17. 31	·1103					
23. 40	51. 10	18. 7	·1115					
23. 59	51. 0	18. 17	·1111					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
July 22	
19. 13	
19. 42	
20. 3	
20. 41	
20. 51	
20. 58	
21. 2	
21. 21	
21. 30	
22. 17	
23. 59	
July 23	
0. 0	20. 51. 0
0. 34	52. 10
0. 48	55. 10
1. 21	55. 30
1. 27	57. 0
1. 33	20. 56. 10
1. 59	21. 0. 0
2. 36	20. 56. 0
2. 53	57. 35
2. 58	56. 45
3. 10	56. 30
3. 15	57. 15
3. 25	56. 0
3. 41	56. 30
3. 47	55. 45
4. 7	56. 0
4. 29	54. 0
5. 0	53. 45
5. 5	53. 0
5. 12	53. 30
5. 16	53. 0
5. 30	54. 30
5. 50	51. 50
5. 57	53. 20
6. 15	49. 30
6. 21	49. 45
6. 25	47. 55
6. 45	46. 10
7. 2	48. 50
7. 38	48. 35
7. 59	47. 0
8. 14	43. 30
8. 33	52. 40
8. 57	45. 30
9. 15	46. 55
9. 46	41. 30
10. 12	44. 0
10. 28	42. 40
10. 45	47. 0
11. 1	41. 50
11. 6	43. 30
11. 30	26. 30
11. 45	35. 30
12. 23	38. 0
12. 49	36. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
July 22	
19. 13	·1113
19. 42	·1107
20. 3	·1110
20. 41	·1108
20. 51	·1110
20. 58	·1106
21. 2	·1113
21. 21	·1108
21. 30	·1120
22. 17	·1106
23. 59	·1115
July 23	
0. 0	·1115
0. 27	·1116
0. 54	·1127
1. 8	·1122
1. 26	·1119
1. 30	·1122
1. 36	·1120
2. 5	·1144
2. 21	·1124
2. 39	·1112
2. 55	·1128
3. 2	·1124
3. 6	·1128
3. 11	·1124
3. 19	·1131
3. 33	·1126
3. 40	·1131
3. 59	·1127
4. 18	·1133
4. 29	·1130
4. 45	·1135
4. 55	·1145
5. 2	·1142
5. 13	·1144
5. 30	·1167
5. 47	·1152
5. 53	·1162
6. 10	·1137
6. 18	·1152
6. 39	·1149
6. 57	·1152
7. 17	·1135
7. 30	·1138
8. 2	·1122
8. 22	·1150
8. 37	·1126
8. 53	·1116
9. 22	·1109
9. 33	·1112
9. 50	·1134
10. 10	·1124
10. 30	·1126
10. 46	·1111
11. 3	·1131
11. 6	·1125

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 23	
0. 46	(†) ·01018
1. 14	·01028 / ·00970
2. 19	·01000
2. 44	·00980
3. 4	·00990
4. 1	·00977
4. 9	·00958
5. 20	·00956
5. 29	·00968
5. 51	·00962
5. 58	·00977
6. 14	·00960
6. 27	·00978
7. 12	·00975
7. 22	·00958
8. 2	·00950
8. 21	·00957
8. 42	·00857
9. 16	·00842
9. 53	·00878
10. 31	·00853
10. 46	·00800
11. 0	·00842
11. 9	·00826
11. 26	·00875
12. 4	·00880
12. 35	·00948
13. 20	·01012 / ·00950
15. 9	·01038 / ·01000
15. 58	·01072 / ·01048
16. 46	·01101 / ·01070
17. 39	·01122 / ·01082
18. 32	·01122 / ·01078
19. 44	·01098 / ·01055
21. 2	·01083 / ·01032

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 23		
0. 0	61 ·5	61 ·8
1. 0	62 ·0	62 ·1
2. 0	62 ·4	62 ·6
3. 0	62 ·9	63 ·0
6. 0	63 ·6	64 ·0
9. 0	63 ·4	64 ·0
12. 0	62 ·0	62 ·0
18. 0	60 ·0	60 ·2
21. 0	60 ·5	60 ·4
22. 0	61 ·0	60 ·9
23. 0	61 ·5	61 ·3

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
July 23	
12. 54	20. 36. 15
13. 23	44. 25
13. 44	44. 30
14. 4	42. 40
14. 15	44. 40
14. 44	44. 50
15. 7	46. 40
15. 39	43. 35
15. 53	44. 10
15. 58	43. 40
16. 3	44. 20
16. 7	43. 35
16. 15	44. 50
16. 25	41. 30
16. 55	39. 40
17. 2	43. 30
17. 15	41. 10
17. 21	41. 35
17. 30	40. 20
17. 40	43. 15
17. 45	43. 0
17. 53	45. 10
17. 57	44. 20
18. 0	45. 15
18. 11	44. 0
18. 25	47. 0
18. 40	43. 15
18. 41	43. 50
18. 45	43. 0
18. 56	45. 0
19. 9	48. 30
19. 15	47. 30
19. 30	49. 25
20. 0	44. 15
20. 15	45. 0
20. 30	44. 10
20. 37	43. 10
20. 45	44. 0
21. 18	41. 0
21. 33	42. 10
21. 39	41. 50
21. 46	43. 10
21. 54	42. 15
22. 21	43. 55
22. 36	43. 15
23. 59	44. 25
July 24	
0. 0	20. 44. 30
0. 34	44. 0
2. 20	46. 10
2. 47	44. 50
2. 55	45. 10
3. 25	44. 50
3. 34	46. 10
5. 22	44. 40
5. 42	42. 15
6. 25	41. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
July 23	
11. 30	·1160
12. 6	·1119
12. 16	·1124
	***
13. 35	·1110
13. 50	·1101
14. 59	·1121
	***
16. 28	·1115
16. 34	·1124
17. 10	·1110
17. 17	·1116
17. 47	·1102
18. 22	·1095
19. 0	·1090
19. 10	·1092
19. 15	·1088
19. 25	·1096
19. 41	·1086
20. 2	·1098
20. 17	·1095
20. 30	·1100
21. 16	·1100
21. 37	·1102
22. 15	·1090
22. 55	·1107
23. 59	·1107
July 24	
0. 0	·1107
0. 32	·1098
0. 49	·1107
0. 55	·1107
	***
2. 7	·1113
2. 25	·1122
3. 32	·1113
3. 47	·1128
4. 10	·1114

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 23	
22. 30	·00997
23. 44	·01008 / ·00957
23. 59	·00968
July 24	
0. 0	·00968
1. 34	·00963
1. 40	·00948
3. 33	·00840
3. 45	·00844
6. 43	·00675
7. 17	·00620
9. 15	·00498
9. 35	·00454
10. 9	·00438

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 24		
0. 0	62 ·1	61 ·9
1. 0	62 ·9	62 ·4
2. 0	64 ·0	63 ·2
3. 0	64 ·9	64 ·0
9. 0	67 ·8	67 ·7
21. 0	64 ·9	64 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
July 24 h m	° ′ ″
7. 16	20. 44. 40
7. 57	43. 20
8. 23	35. 10
8. 34	38. 0
8. 54	38. 0
9. 15	43. 30
9. 37	43. 0
10. 15	46. 10
10. 30	45. 10
10. 45	40. 50
11. 0	38. 55
11. 18	32. 0
11. 32	35. 30
11. 44	35. 15
11. 51	37. 0
12. 5	34. 10
13. 10	28. 20
13. 31	37. 50
14. 2	44. 0
14. 36	42. 50
14. 56	42. 30
15. 9	40. 15
15. 23	40. 25 ***
16. 2	42. 50
16. 13	44. 20 ***
17. 8	42. 0
17. 24	43. 0
18. 0	41. 55 ***
18. 45	37. 10
19. 46	39. 25
20. 12	42. 30
20. 36	41. 0
21. 46	43. 0
22. 51	48. 10
23. 17	48. 40
23. 38	52. 10
23. 59	51. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 24 h m	
4. 38	·1108 ***
5. 14	·1118
5. 21	·1117
5. 39	·1124
5. 52	·1120 ***
6. 29	·1127 ***
6. 54	·1123 ***
7. 8	·1124
7. 29	·1130
7. 35	·1129
7. 48	·1133
8. 21	·1117
8. 36	·1126
8. 50	·1122
9. 4	·1135
9. 30	·1123
10. 8	·1143
10. 20	·1136
10. 45	·1088
10. 59	·1094
11. 5	·1089
11. 30	·1120
11. 47	·1117
12. 1	·1112 ***
12. 47	·1112 ***
13. 30	·1094
13. 40	·1096 ***
14. 10	·1112
14. 17	·1109
14. 45	·1111
14. 55	·1114
15. 2	·1109
15. 16	·1111 ***
16. 11	·1106 ***
17. 8	·1107
17. 43	·1098
17. 53	·1102
18. 24	·1094
19. 0	·1106
19. 20	·1106
19. 44	·1100 ***
20. 40	·1098 ***
21. 4	·1094
21. 19	·1096 ***
21. 47	·1097 ***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
July 24 h m	
10. 52	·00374
11. 8	·00386
11. 21	·00380
11. 37	·00418
13. 39	·00500
14. 5	·00542
16. 14	·00695
19. 1	·00776
21. 18	·00760
23. 59	·00583

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
July 25	
0. 0	20. 50. 50
0. 5	51. 0
0. 16	52. 30
1. 3	52. 15
1. 22	51. 0
1. 32	51. 0
1. 46	49. 15
1. 53	50. 5
2. 5	49. 10
2. 12	48. 10
2. 25	48. 0
2. 33	48. 50
2. 44	48. 0
2. 52	48. 10
3. 13	44. 40
3. 25	45. 0
4. 16	42. 40
4. 33	40. 55
4. 42	41. 30
4. 52	40. 55
5. 16	41. 35
5. 53	39. 30
6. 19	39. 40
6. 37	38. 50
6. 53	40. 0
7. 15	39. 5
7. 50	40. 30
8. 3	40. 0
8. 45	43. 50
9. 38	43. 30
9. 51	45. 15
10. 6	44. 40
10. 44	48. 20
11. 15	46. 20
11. 51	48. 15
12. 12	47. 50
12. 21	48. 10
12. 42	47. 30
12. 56	48. 15
13. 9	46. 20
13. 17	46. 20
13. 30	48. 50
14. 2	47. 30
14. 33	49. 0
15. 46	45. 0
16. 29	44. 30
16. 48	45. 10
17. 8	44. 30
17. 18	45. 15
17. 33	44. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 24 h m	
22. 18	·1088 ***
22. 52	·1103 (†)
23. 43	·1070
23. 59	·1092
July 25	
0. 0	·1092
0. 23	·1114
1. 4	·1102
1. 18	·1103
1. 29	·1098
1. 43	·1106
1. 52	·1099
1. 58	·1108
2. 7	·1110
2. 17	·1101
2. 30	·1102
2. 37	·1109
2. 54	·1108
3. 0	·1111
3. 19	·1091
3. 31	·1100
3. 37	·1095
4. 1	·1100
4. 7	·1092
4. 27	·1102
4. 32	·1100
4. 46	·1102
4. 59	·1096
5. 33	·1099
5. 47	·1106
6. 20	·1104
6. 32	·1106
6. 38	·1103
6. 59	·1112
7. 22	·1112
7. 47	·1120
8. 17	·1102
8. 25	·1104
8. 45	·1099
8. 53	·1102
9. 15	·1097
9. 46	·1096
9. 58	·1106
10. 12	·1094
10. 35	·1096
10. 44	·1104
10. 59	·1097
11. 20	·1094
11. 59	·1095
12. 35	·1092
12. 47	·1095
13. 3	·1091
13. 58	·1089
15. 5	·1094
16. 16	·1093

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
July 25 h m	
0. 0	·00583
0. 26	·00554
1. 58	·00272
2. 30	·00238
3. 56:	·00672
5. 45	·01002 / ·01070 ***
7. 30	·01038 / ·01134
8. 14	·01018 / ·01110
11. 13	·01027
14. 11	·01250
19. 53	·01938
21. 21	·02040 / ·01862
23. 59	·01743

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 25 h m	°	°
1. 0	68·3	67·9
3. 0	70·1	69·9
9. 0	71·8	72·2
21. 0	66·5	64·9

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 25		July 25						
h m	° ′ ″	h m		h m		h m	°	°
17. 45	20. 43. 30	16. 30	·1098					
17. 53	44. 10	17. 4	·1095					
18. 1	43. 50	17. 28	·1086					
18. 11	44. 10	17. 47	·1086					
18. 32	42. 35	18. 4	·1066					
18. 48	45. 20		(†)					
19. 7	43. 0	21. 0	·1096*					
20. 56	40. 0	23. 59	·1082					
21. 30	41. 0							
22. 20	44. 40							
22. 31	44. 30							
	***							
23. 59	54. 50							
July 26		July 26		July 26		July 26		
0. 0	20. 55. 0	0. 0	·1082	0. 0	·01743	1. 0	71·2	69·8
1. 9	59. 30	0. 5	·1087	1. 44	·01528	3. 0	73·9	73·0
1. 37	58. 10	0. 19	·1082	4. 1	·01090	9. 18	74·0	73·2
2. 14	58. 20	0. 32	·1091	5. 0	·00920	22. 34	65·2	64·2
2. 54	56. 0	0. 40	·1087	5. 10	·00906			
3. 30	56. 50	0. 52	·1092	5. 50	·01016			
	***	1. 2	·1091	7. 3	{·01124			
4. 35	54. 10	1. 27	·1089		{·01178			
	***	1. 55	·1095	8. 13	{·01118			
5. 57	53. 55	2. 7:	·1109		{·01214			
6. 6	54. 10	2. 32	·1079	9. 27	·01200			
6. 19	53. 0	2. 58	·1077	11. 31	·01338			
	***	3. 8	·1084	16. 43	{·02077			
7. 23	55. 0	3. 15	·1077		{·02028			
8. 16	54. 50	3. 28	·1085	20. 4	·01787			
8. 30	53. 30	4. 0	·1079	20. 8	·01760			
	***		***	20. 43	·01782			
10. 0	53. 45	4. 52	·1089	20. 56	·01755			
	***		***	22. 33	·01780			
10. 37	57. 0	5. 20	·1081		(†)			
	***	5. 30	·1086					
11. 11	54. 30	5. 55	·1073					
11. 28	55. 50	6. 7	·1077					
11. 45	52. 55		* * *					
12. 27	51. 30	7. 27	·1084					
12. 40	52. 20	7. 45	·1080					
	***	8. 7	·1089					
15. 48	51. 0	8. 26	·1080					
	***	8. 49	·1079					
16. 19	52. 10	9. 0	·1083					
17. 41	48. 10	9. 8	·1079					
18. 2	49. 0	9. 33	·1083					
	***	9. 52	·1082					
18. 26	47. 10		***					
	***	11. 18	·1090					
19. 53	49. 35		***					
20. 7	48. 25	12. 2	·1084					
20. 23	49. 0	12. 10	·1086					
20. 50	48. 0	12. 20	·1084					
21. 30	50. 0		***					
21. 37	48. 35	15. 32	·1093					
21. 59	49. 45		***					
22. 19	49. 0	16. 0	·1092					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 26		July 26						
h m	° ′ ″	h m		h m		h m	°	°
23. 0	20. 51. 0	16. 15	·1095					
23. 37	52. 25	16. 46	·1090					
23. 59	52. 10	17. 8	·1094					
			***					
		17. 52	·1088					
		18. 2	·1090					
			***					
		18. 34	·1078					
			* * *					
		19. 2	·1076					
			***					
		20. 11	·1065					
			* * *					
		21. 53	·1066					
		22. 15	·1078					
		22. 45	·1077					
		23. 0	·1084					
		23. 35	·1092					
		23. 53	·1089					
		23. 59	·1090					
July 27		July 27		July 27		July 27		
0. 0	20. 52. 10	0. 0	·1090	0. 0	·01374	9. 0	69·4	69·8
0. 36	53. 30	0. 22	·1096	2. 3	·01142	21. 0	59·5	58·9
1. 15	53. 45	0. 52	·1090	4. 57	·00622			
1. 39	56. 0	1. 15	·1088	5. 17	{·00591			
2. 44	53. 45	1. 33	·1096		{·00620			
3. 0	54. 55	2. 9	·1095		* * *			
3. 8	53. 55	2. 20	·1100	7. 7	{·00616			
3. 28	54. 0	2. 57	·1094		{·00663			
	***	3. 6	·1099	7. 42	{·00632			
5. 0	50. 0	3. 22	·1095		{·00676			
	***	4. 0:	·1104	10. 52:	·00757			
6. 18	50. 0	4. 25	·1092	13. 46	·01116			
6. 54	52. 0	4. 46	·1098	15. 0	·01255			
7. 17	51. 0	5. 12	·1090	16. 36	·01521			
	***	5. 51	·1087	17. 43	·01340			
8. 29	51. 0	6. 19	·1088	17. 51	·01305			
8. 45	53. 0	6. 50	·1082	18. 3	{·01312			
9. 17	49. 0	7. 25:	·1094		{·00897			
9. 36	51. 5	8. 0:	·1087	20. 28	{·00972			
9. 52	51. 10	8. 34	·1101		{·00920			
10. 15	53. 0	8. 47	·1101	21. 15	{·00928			
10. 22	52. 15	8. 58	·1093		{·00892			
11. 29	53. 30	9. 10	·1091	23. 59	·00754			
11. 55	50. 45	9. 28	·1096					
12. 56	52. 30	9. 48	·1090					
13. 22	56. 50	10. 17	·1083					
13. 52	57. 5	10. 45	·1080					
14. 45	51. 50	11. 32:	·1086					
16. 3	49. 50	12. 6	·1081					
16. 24	50. 35	12. 35	·1076					
17. 7	48. 0		***					
17. 27	49. 0	14. 7	·1098					
17. 57	48. 40	14. 42	·1092					
18. 44	50. 50	16. 37	·1092					
19. 50	49. 20	17. 30	·1088					
20. 6	50. 30	18. 1	·1075					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 27		July 27						
h m	° ′ ″	h m		h m		h m	°	°
20. 23	20. 48. 50	18. 20	·1068					
21. 50	48. 15	19. 11	·1063					
22. 30	49. 20	20. 13	·1069					
23. 28	52. 50	20. 18	·1063					
23. 59	53. 0	21. 21	·1054					
		21. 39	·1058					
		22. 5	·1052					
		22. 22	·1055					
		22. 30	·1051					
		22. 53	·1061					
		23. 2	·1061					
		23. 16	·1066					
		23. 42	·1068					
			(†)					
July 28		July 28		July 28		July 28		
0. 0	20. 52. 55		(†)	0. 0	·00754	1. 0	64 ·0	63 ·5
0. 30	53. 30	1. 0	·1100*	1. 41	·00583	3. 0	66 ·8	66 ·5
1. 11	53. 0	1. 4	·1097	2. 3	·00558	9. 0	68 ·0	68 ·5
1. 23	54. 25	1. 29	·1106	5. 12	·00114	21. 0	61 ·1	60 ·9
1. 42	53. 5	2. 9	·1114	6. 38	—·00040			
2. 9	53. 50	2. 19	·1110	7. 2	{—·00025 ·00050			
2. 17	53. 10	2. 40	·1113					
3. 23	52. 50	3. 36	·1107	7. 18	{·00038 ·00091			
3. 32	53. 20	4. 16	·1113					
3. 45	52. 50	5. 4	·1105	7. 54	{·00035 ·00083			
3. 58	53. 0	5. 48	·1110					
	***	6. 8	·1105	9. 46	·00068			
4. 47	50. 50	6. 26	·1110	11. 37	·00160			
5. 0	51. 0	6. 41	·1105	12. 41	·00184			
5. 15	50. 50	7. 13	·1101	13. 10	·00227			
5. 48	51. 35	7. 24	·1104	13. 44	·00263			
5. 56	52. 15	7. 48	·1098	14. 41	·00401			
6. 8	51. 20	8. 29	·1099	19. 3	·00918			
	***	8. 37	·1102	19. 13	·00922			
7. 23	53. 50	9. 0	·1104	19. 46	{·00972 ·00920			
7. 42	52. 25	9. 15	·1101					
	***	9. 35	·1103	20. 20	{·00978 ·00940			
8. 16	54. 0	10. 3	·1097					
	***	10. 17	·1104	20. 56	{·00986 ·00941			
9. 38	53. 50	10. 36	·1102					
10. 9	51. 35	10. 53	·1094	21. 33	{·00963 ·00917			
10. 15	51. 55	11. 27	·1102					
11. 9	48. 0	11. 53	·1110	22. 13	·00922			
11. 56	52. 0	12. 2	·1105	22. 44	{·00881 ·00840			
12. 22	48. 35	12. 10	·1116					
12. 30	50. 10	12. 23	·1114	23. 59	·00752			
12. 56	47. 0	12. 38	·1101					
13. 15	54. 40	12. 41	·1102					
13. 45	48. 50	12. 58	·1097					
14. 13	46. 35	13. 13	·1094					
14. 38	51. 45	13. 20	·1096					
14. 50	51. 0	13. 36	·1110					
	***	13. 59	·1105					
15. 57	51. 30	14. 29	·1089					
	***	14. 55	·1097					
17. 30	46. 0	15. 1	·1101					
	***	15. 16	·1099					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 28		July 28						
h m	° ′ ″	h m		h m		h m	°	°
17. 53	20. 47. 0	15. 30	·1102					
18. 9	46. 0		***					
18. 56	47. 25	16. 47	·1105					
19. 13	42. 5		***					
19. 20	43. 35	17. 36	·1099					
19. 38	44. 20		***					
19. 51	43. 50	20. 18	·1087					
20. 10	45. 0	20. 43	·1070					
20. 27	43. 50	20. 56	·1073					
20. 46	46. 10	21. 31	·1069					
22. 35	50. 25	21. 59	·1072					
22. 54	50. 0	22. 33	·1092					
23. 13	51. 40	22. 43	·1097					
23. 22	51. 50	23. 6	·1100					
23. 53	54. 55	23. 16	·1093					
23. 57	54. 45	23. 22	·1093					
23. 59	54. 55	23. 25	·1093					
		23. 42	·1099					
		23. 47	·1096					
		23. 53	·1101					
		23. 59	·1098					
July 29		July 29		July 29		July 29		
0. 0	20. 54. 55	0. 0	·1098	0. 0	·00752	1. 0	66 ·7	66 ·4
0. 57	56. 0		***	0. 35	·00683	3. 0	69 ·6	69 ·4
1. 24	57. 45	0. 30	·1095	4. 7	·00047	9. 0	69 ·4	69 ·6
1. 57	56. 0	0. 49	·1098		***	21. 0	61 ·9	63 ·0
2. 5	56. 25	1. 18	·1100	6. 48	·00022	22. 0	62 ·0	63 ·0
2. 24	53. 55	1. 38	·1096	6. 55	·00043	23. 0	62 ·5	63 ·1
2. 30	54. 45	1. 49	·1098	7. 5	{·00042 ·00097			
2. 48	53. 0	2. 3	·1093					
3. 18	53. 10	2. 7	·1095	9. 2	·00108			
3. 48	54. 30	2. 22	·1086	17. 24	·00752			
3. 57	53. 30	2. 53	·1109	20. 9	{·00925 ·00872			
4. 15	54. 50	3. 14	·1113					
4. 28	53. 40	3. 43	·1103	20. 46	{·00920 ·00844			
4. 49	53. 50	4. 15	·1098					
5. 12	52. 0	4. 32	·1100	22. 37	·00958			
5. 48	53. 0	4. 43	·1085	23. 59	·00910			
6. 18	56. 30	4. 58	·1089					
7. 2	56. 50	5. 16	·1086					
8. 7	52. 55	5. 24	·1080					
	***	5. 31	·1084					
9. 18	55. 25	6. 1	·1075					
	***		***					
12. 24	53. 55	7. 8	·1086					
13. 51	54. 25	7. 23	·1083					
14. 11	53. 10	7. 36	·1089					
14. 25	54. 25	8. 2	·1090					
14. 53	53. 10	8. 17	·1097					
15. 34	53. 30	8. 32	·1088					
16. 45	51. 10	10. 5	·1084					
17. 27	51. 0		***					
17. 35	49. 30	12. 6	·1084					
17. 44	52. 30		***					
18. 12	50. 15	13. 45	·1092					
18. 30	52. 0	14. 7	·1088					
18. 52	51. 10	14. 57	·1089					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 29		July 29						
h m	° ′ ″	h m		h m		h m	°	°
19. 0	20. 52. 30	15. 35	·1094					
	***	16. 41	·1094					
19. 40	52. 0	16. 54	·1090					
20. 8	54. 0	17. 43	·1092					
20. 33	53. 0	18. 4	·1090					
20. 45	53. 15	18. 30	·1094					
21. 11	51. 50	18. 45	·1091					
21. 30	52. 0	18. 52	·1092					
21. 41	51. 10	19. 34	·1086					
22. 0	51. 30	20. 2	·1089					
	***	20. 45	·1088					
23. 57	59. 0	21. 35	·1080					
23. 59	58. 40	21. 40	·1081					
		22. 0	·1075					
		23. 20	·1066					
		23. 59	·1069					
July 30		July 30		July 30		July 30		
0. 0	20. 58. 20	0. 0	·1069	0. 0	·00910	0. 0	63·5	64·0
	***	0. 12	·1069	1. 51	·00752	1. 0	65·0	65·0
1. 46	21. 0. 0	0. 49	·1090	4. 59	·00371	2. 0	66·1	66·2
2. 15	20. 59. 0	1. 19	·1091	6. 44	·00250	3. 0	67·3	68·3
2. 31	21. 0. 0	2. 8	·1106		·00268	6. 0	69·4	69·3
2. 57	20. 58. 20	2. 17	·1106	7. 23	·00217	9. 0	69·3	69·5
3. 5	59. 0	2. 40	·1115		·00258	12. 0	66·0	65·7
4. 1	56. 30	2. 55	·1107	8. 40	·00200	18. 0	61·4	61·9
4. 49	56. 30	3. 24	·1119	10. 15	·00233	21. 0	61·6	61·4
5. 2	55. 10	3. 43	·1114	10. 33	·00230	22. 0	62·2	62·1
5. 34	53. 50	3. 52	·1116	13. 34	·00425	23. 0	63·4	63·0
6. 20	53. 0	4. 6	·1107	17. 17	·00876			
6. 51	46. 50	5. 0	·1120	19. 11	·01082			
7. 6	49. 40	5. 13	·1116		·00665			
7. 17	50. 0		***	22. 42	·00564			
7. 35	52. 15	5. 50	·1121		·00532			
7. 59	52. 15	6. 24	·1119	23. 59	·00470			
	***	6. 44	·1113					
9. 21	55. 50	7. 2	·1125					
10. 9	54. 25	7. 17	·1115					
10. 21	56. 0	7. 25	·1116					
10. 39	51. 40	8. 17	·1107					
10. 54	50. 25	8. 30	·1104					
11. 8	50. 35	9. 6	·1105					
11. 45	48. 0	9. 17	·1108					
12. 42	49. 10	10. 0	·1107					
12. 59	48. 30	10. 23	·1125					
14. 44	57. 0	10. 42	·1109					
15. 30	53. 50	10. 49	·1111					
	***	11. 10	·1108					
17. 21	52. 0	11. 32	·1100					
17. 30	50. 50	11. 57	·1101					
18. 48	47. 10		***					
18. 59	47. 30	13. 21	·1095					
19. 15	46. 20		***					
19. 26	46. 50	14. 17	·1097					
20. 2	46. 0	15. 0	·1101					
20. 41	46. 15	15. 33	·1100					
21. 2	45. 50		***					
21. 40	46. 30	17. 3	·1102					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 30		July 30						
h m	° ′ ″	h m		h m		h m	°	°
23. 35	20. 53. 0	17. 15	·1106					
23. 59	54. 35	17. 29	·1103					
			***					
		18. 0	·1102					
		18. 34	·1096					
		19. 17	·1095					
		19. 40	·1090					
			***					
		21. 31	·1084					
		21. 47	·1080					
		23. 0	·1079					
		23. 59	·1086					
July 31		July 31		July 31		July 31		
0. 0	20. 54. 40	0. 0	·1089	0. 0	·00470	0. 0	64·5	64·0
0. 5	54. 30	0. 44	·1097	0. 29	·00456	1. 0	65·9	65·0
1. 15	58. 0	1. 16	·1099		·00428	2. 0	67·2	66·4
	***		***	2. 15	·00324	3. 0	68·6	68·0
4. 46	52. 50	2. 45	·1097	8. 3	—·00205	9. 0	69·0	68·9
	***		***	12. 31	·00006	21. 0	63·9	62·3
10. 24	54. 0	3. 36	·1102	17. 59	·00592			
	***		***	18. 22	·00604			
11. 14	51. 25	4. 36	·1099		·00555			
12. 33	53. 0		***	19. 6	·00598			
	***	6. 52	·1103		·00558			
13. 26	51. 10		***	20. 2	·00597			
	***	8. 12	·1110		·00560			
15. 33	51. 30	8. 45	·1113	21. 10	·00584			
15. 45	52. 30	9. 1	·1116		·00540			
	***		***	22. 6	·00503			
17. 8	52. 20	10. 45	·1115	23. 12	·00412			
17. 50	54. 0	11. 3	·1120		(†)			
18. 3	53. 0	11. 17	·1116					
18. 20	54. 0	11. 47	·1115					
18. 37	53. 10	12. 11	·1118					
18. 56	53. 45	12. 25	·1114					
19. 4	53. 0	13. 15	·1108					
19. 25	53. 10		***					
19. 48	51. 0	15. 32	·1106					
	***	15. 58	·1109					
20. 58	50. 25	17. 7	·1112					
21. 41	52. 0		***					
22. 30	51. 40	17. 29	·1110					
22. 51	53. 0		***					
22. 57	52. 10	17. 56	·1111					
23. 59	55. 30		***					
		18. 49	·1095					
			***					
		19. 17	·1097					
		19. 45	·1092					
		19. 57	·1094					
		20. 11	·1090					
		20. 35	·1091					
		21. 4	·1089					
		21. 44	·1096					
			***					
		22. 32	·1093					
		22. 51	·1084					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	July 31 h m		h m		h m	°	°
		23. 1	·1092					
			***					
		23. 56	·1097					
		23. 59	·1098					
Aug. 1		Aug. 1		Aug. 1		Aug. 1		
0. 0	20. 55. 30	0. 0	·1098	0. 0	·00300	1. 0	69 ·0	67 ·8
	***	0. 7	·1100	0. 51	·00218	3. 0	72 ·3	71 ·0
1. 7	58. 20	0. 18	·1094	1. 48	·00080	9. 0	73 ·0	72 ·2
1. 34	57. 45	0. 40	·1093		(†)	21. 0	62 ·0	62 ·0
	***	1. 7	·1086	3. 0	–·00119*			
3. 0	58. 55	1. 20	·1084	9. 0	·00134*			
3. 9	58. 10	1. 46	·1089	20. 44	·00760			
3. 22	58. 30	2. 10	·1087	20. 52	·00727			
3. 27	57. 45	2. 23	·1089	21. 34	{·00749			
3. 38	58. 10	2. 32	·1087		{·00720			
3. 45	59. 5		(†)	22. 15	{·00723			
3. 57	57. 10	3. 0	·1121*		{·00677			
5. 6	54. 55	9. 0	·1092*	23. 32	·00605			
5. 15	55. 15	20. 43	·1084		(†)			
7. 2	55. 0	20. 59	·1083					
7. 32	56. 10		***					
8. 11	54. 30	21. 31	·1077					
9. 2	55. 0	22. 8	·1077					
9. 50	56. 0		***					
10. 47	53. 50	23. 1	·1082					
	***	23. 41	·1098					
11. 34	55. 0		***					
	***	23. 49	·1096					
12. 26	53. 5	23. 59	·1098					
13. 37	52. 50							
14. 14	53. 20							
14. 32	57. 25							
15. 14	53. 30							
16. 3	52. 0							
16. 50	53. 0							
17. 9	51. 30							
17. 30	51. 10							
17. 45	50. 10							
18. 0	51. 0							
18. 26	48. 55							
21. 30	49. 15							
23. 59	55. 45							
Aug. 2		Aug. 2		Aug. 2		Aug. 2		
0. 0	20. 55. 45	0. 0	·1098		(†)	1. 0	66 ·1	66 ·0
1. 40	55. 35	0. 37	·1100	0. 27	·00564	3. 0	68 ·5	68 ·6
1. 45	54. 10	1. 0	·1104	2. 8	·00437	9. 0	70 ·5	70 ·8
1. 56	57. 0	1. 19	·1101	3. 34	·00230	22. 32	64 ·0	65 ·0
2. 6	55. 10	1. 52	·1100	6. 15	–·00123			
2. 15	56. 40	2. 3	·1104	7. 42	{–·00160			
2. 28	53. 55	2. 10	·1102		{–·00106			
3. 8	52. 30	2. 25	·1104	10. 14:	–·00112			
	***	2. 33	·1102	13. 10	·00068			
3. 53	52. 35	2. 48	·1105	14. 34	·00182			
4. 45	53. 40	3. 0	·1113	19. 27	·00743			
	***	3. 17	·1105	20. 26	{·00762			
6. 8	53. 0	3. 46	·1112		{·00736			
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 2		Aug. 2		Aug. 2				
h m	° ′ ″	h m		h m		h m	°	°
7. 0	20. 53. 25	4. 1	·1106					
8. 10	53. 10	4. 20	·1104	21. 7	{·00760			
	***	4. 36	·1105		{·00470			
9. 11	55. 40	5. 3	·1100	22. 29	{·00452			
10. 39	53. 0	5. 34	·1089		{·00382			
11. 57	53. 10	6. 7	·1091	23. 59	·00330			
12. 17	54. 30	6. 37	·1098					
14. 0	56. 10	7. 5	·1098					
15. 20	51. 10	7. 13	·1101					
15. 44	52. 45	7. 34	·1102					
15. 54	52. 0	7. 49	·1097					
16. 27	53. 10		***					
16. 57	49. 30	9. 5	·1102					
	***	9. 15	·1105					
17. 30	50. 40		***					
18. 0	50. 45	10. 35	·1095					
	***		***					
19. 0	48. 40	11. 24	·1095					
	***	11. 40	·1098					
20. 2	50. 0	12. 10	·1098					
20. 23	49. 35	12. 39	·1099					
20. 54	50. 30	13. 17	·1097					
21. 17	50. 0	13. 53	·1102					
22. 37	51. 50	14. 17	·1101					
23. 2	53. 50	14. 50	·1105					
23. 9	53. 10	15. 20	·1102					
23. 59	57. 20	15. 56	·1104					
		16. 27	·1109					
		16. 58	·1104					
		17. 47	·1105					
		18. 29	·1087					
		18. 42	·1092					
		19. 18	·1083					
		20. 47	·1085					
		21. 3	·1081					
		22. 10	·1077					
		22. 29	·1077					
		23. 2	·1086					
		23. 10	·1085					
		23. 37	·1091					
		23. 59	·1090					
Aug. 3		Aug. 3		Aug. 3		Aug. 3		
0. 0	20. 57. 30	0. 0	·1090	0. 0	·00330	8. 34	70 ·6	70 ·2
0. 27	59. 0	0. 17	·1092	0. 53	·00296	21. 0	62 ·5	62 ·2
0. 41	58. 25	0. 45	·1088	2. 23	·00178			
1. 3	59. 0	0. 58	·1091	5. 2	–·00148			
1. 14	57. 50	1. 17	·1083	6. 40	–·00305			
1. 23	59. 0	1. 36	·1093		(†)			
1. 44	58. 15	1. 57	·1104	8. 34	–·00369*			
	***	2. 5	·1102	10. 39	–·00298			
2. 10	58. 55	2. 22	·1113	14. 11	·00001			
	***	2. 32	·1109	16. 36	·00300			
2. 59	55. 30		***	18. 4	·00494			
	***	2. 53	·1111	19. 45	·00538			
3. 31	56. 0		***	19. 53	·00497			
3. 39	55. 0	3. 7	·1105	20. 10	·00522			
4. 12	57. 0		***	20. 22	·00439			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

August 3. From 6h. 40m. to 10h. 39m. the trace of the Vertical Force Magnet was off the sheet, in the direction of diminishing force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 3		Aug. 3		Aug. 3				
h m	° ′ ″	h m		h m		h m	°	°
4. 57	20. 53. 45	3. 25	·1108	20. 53	·00500			
5. 8	54. 30	3. 49	·1102	21. 4	·00426			
5. 53	52. 0	4. 7	·1103	21. 40	·00387			
6. 14	52. 0	4. 26	·1096		(†)			
6. 53	56. 0	4. 37	·1095	22. 23	·00406			
	***	4. 58	·1083	22. 42	·00463			
8. 33	55. 50	5. 13	·1094	22. 59	·00432			
	***	5. 32	·1084	23. 59	·00420			
9. 10	54. 0	5. 44	·1088					
	***	5. 52	·1094					
10. 13	55. 10	6. 1	·1092					
	***	6. 14	·1096					
11. 3	52. 10	6. 30	·1092					
	***	6. 35	·1096					
14. 10	52. 0	6. 47	·1098					
14. 24	54. 0	7. 9	·1092					
14. 59	55. 0	7. 33	·1095					
15. 38	50. 40	8. 47	·1093					
15. 53	52. 0	9. 27	·1095					
16. 11	48. 0	9. 47	·1099					
16. 19	48. 50	10. 2	·1096					
16. 27	48. 0	10. 16	·1097					
16. 36	50. 0	10. 29	·1096					
16. 49	46. 5	10. 41	·1097					
16. 58	45. 50	10. 52	·1090					
17. 42	53. 15	11. 11	·1099					
17. 51	20. 53. 0	11. 20	·1098					
18. 15	21. 2. 0	12. 38	·1097					
18. 52	7. 50	13. 17	·1100					
19. 9	3. 5	13. 45	·1096					
19. 14	9. 10	14. 11	·1097					
19. 22	3. 0	14. 19	·1103					
19. 28	7. 40	14. 30	·1101					
	***	14. 43	·1106					
19. 53	4. 20	14. 51	·1104					
20. 6	21. 6. 0	15. 6	·1112					
20. 28	20. 54. 10	15. 15	·1109					
20. 38	21. 0. 0	15. 41	·1109					
20. 45	20. 59. 0	15. 49	·1111					
	***	15. 58	·1109					
20. 54	21. 0. 0	16. 11	·1108					
21. 3	20. 55. 10	16. 21	·1104					
21. 8	57. 55	16. 30	·1110					
21. 29	48. 25	16. 36	·1105					
21. 33	52. 20	16. 53	·1104					
21. 41	20. 39. 30	17. 21	·1103					
21. 55	21. 4. 15	17. 55	·1089					
22. 5	21. 4. 35	18. 3	·1090					
22. 18	20. 53. 10	18. 34	·1050					
22. 24	21. 2. 0	18. 53	·1070					
22. 33	20. 58. 45	19. 2	·1101					
22. 47	21. 6. 10	19. 12	·1035					
22. 58	21. 6. 0	19. 19	·1062					
23. 33	20. 55. 55	19. 23	·1056					
23. 47	57. 10	19. 29	·1074					
23. 58	20. 55. 0	19. 32	·1064					
23. 59	21. 2. 0	19. 36	·1080					
		19. 57	·1111					
		20. 0	·1097					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Aug. 3						
h m	° ′ ″	h m		h m		h m	°	°
		20. 2	·1109					
		20. 14	·1047					
		20. 30	·1104					
		20. 36	·1090					
		20. 48	·1109					
		20. 55	·1077					
		21. 2	·1091					
		21. 19	·1053					
		21. 24	·1070					
		21. 31	·1051					
		21. 41	·1050					
		21. 48	·1090					
		22. 7	·1050					
		22. 8	·1075					
		22. 17	·1052					
		22. 19	·1067					
		22. 25	·1061					
		22. 33	·1055					
		22. 38	·1094					
		22. 41	·1083					
		22. 50	·1092					
		22. 52	·1084					
		23. 0	·1066					
		23. 4	·1078					
		23. 7	·1069					
		23. 12	·1079					
		23. 15	·1069					
		23. 22	·1083					
		23. 28	·1085					
		23. 30	·1098					
		23. 31	·1084					
		23. 40	·1114					
		23. 59	·1079					
		Aug. 4		Aug. 4		Aug. 4		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	21. 2. 0	0. 0	·1079	0. 0	·00420	1. 0	66 ·0	66 ·0
0. 10	20. 59. 50	0. 8	·1089	0. 14	·00423	3. 0	68 ·3	68 ·6
0. 24	21. 6. 10	0. 17	·1062	0. 21	·00407	9. 0	69 ·6	69 ·7
0. 33	5. 0	0. 23	·1108	0. 35	·00428	21. 0	65 ·5	65 ·3
0. 35	10. 50		(†)	0. 43	·00410			
0. 45	5. 0	1. 0	·1084	0. 51	·00442			
0. 49	10. 0	1. 10	·1076		(†)			
0. 57	1. 20	1. 22	·1129	1. 0	·00272*			
0. 58	10. 0		(†)	2. 32	·02206			
1. 12	6. 10	1. 51	·1132	3. 27	·02480			
1. 22	1. 5	1. 58	·1083	4. 17	·02662			
	***	2. 2	·1103	4. 26	·02158			
1. 29	21. 7. 20	2. 7	·1082	4. 31	·02120			
1. 39	20. 53. 30	2. 14	·1137	4. 38	·02680			
1. 40	21. 14. 0	2. 17	·1096	4. 43	·02708			
1. 48	8. 20	2. 19	·1112	5. 6	·02717			
	***	2. 20	·1088	5. 15	·02735			
2. 12	4. 0	2. 30	·1131	5. 37	·02748			
2. 20	8. 10	2. 32	·1108	6. 14	·02782			
2. 25	4. 10		(†)	6. 27	·02770			
2. 28	14. 30	3. 0	·1057*	6. 37	·02783			
2. 31	5. 45	3. 7	·1057	6. 41	·02807			
2. 36	13. 45	3. 14	·1075	7. 1	·02775			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

VERTICAL FORCE.—August 4d. 1h. The adjustments were altered, so that the scale reading was increased by 13div.·50, or by 0·02136 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 4		Aug. 4		Aug. 4				
h m	° ′ ″	h m		h m		h m	°	°
2. 38	21. 6. 50	3. 16	·1069	7. 19	·02790			
					·02824			
2. 51	3. 30	3. 18	·1078					
2. 57	21. 4. 30	3. 23	·1071	8. 1	·02770			
	***		(†)	8. 38	·02782			
					·02838			
3. 33	20. 58. 50	3. 31	·1116					
3. 36	21. 1. 25	3. 34	·1097	9. 21	·02796			
	***	3. 39	·1106	9. 27	·02758			
4. 3	20. 56. 0	3. 41	·1092	9. 41	·02748			
4. 8	56. 45	3. 48	·1079	9. 52	·02760			
4. 13	55. 0	3. 55	·1090	10. 6	·02720			
4. 36	57. 50	4. 0	·1087	10. 19	·02708			
4. 43	55. 45	4. 8	·1076	10. 28	·02724			
4. 50	58. 10	4. 14	·1084	10. 38	·02668			
4. 55	55. 0	4. 16	·1076	10. 49	·02673			
	***	4. 32	·1107	10. 59	·02628			
5. 15	58. 40	4. 39	·1078	11. 13	·02677			
	***	4. 48	·1111	11. 31	·02644			
5. 49	54. 0	4. 52	·1082	11. 41	·02617			
5. 57	54. 0	5. 1	·1120	11. 50	·02614			
6. 6	53. 50	5. 2	·1098	12. 4	·02522			
6. 33	56. 30	5. 7	·1112	12. 12	·02562			
6. 50	55. 0	5. 8	·1090	12. 18	·02488			
7. 11	57. 30	5. 10	·1097	12. 23	·02470			
7. 26	57. 25	5. 22	·1084	12. 38	·02268			
7. 36	56. 5	5. 29	·1093	12. 43	·02350			
8. 9	57. 30	5. 43	·1080	12. 59	·02504			
	***	5. 47	·1085	13. 8	·02482			
8. 41	53. 20	5. 49	·1077	13. 28	·02520			
8. 50	55. 55	6. 2	·1100	13. 37	·02456			
9. 6	48. 0	6. 10	·1100	13. 44	·02483			
9. 7	20. 37. 45	6. 17	·1104	14. 8	·02322			
	***	6. 25	·1098	14. 15	·02420			
9. 29	21. 8. 30	6. 32	·1101	14. 19	·02395			
	***	6. 37	·1085	14. 28	·02330			
9. 33	20. 55. 0	7. 4	·1099	14. 32	·02327			
10. 1	21. 14. 40	7. 9	·1093	14. 37	·02356			
10. 23	20. 55. 25	7. 19	·1093	14. 49	·02234			
10. 32	21. 5. 40	7. 30	·1079	15. 0	·02302			
10. 39	20. 55. 50	7. 41	·1094	15. 4	·02300			
10. 46	21. 8. 10		***	15. 13	·02448			
10. 57	20. 55. 55	8. 31	·1085	15. 24	·02455			
11. 14	58. 0	8. 47	·1094	15. 31	·02428			
11. 47	20. 45. 0	9. 15	·1130	15. 34	·02457			
12. 12	21. 3. 35	9. 19	·1123	15. 50	·02610			
12. 33	20. 21. 15	9. 22	·1149	16. 2	·02607			
12. 53	21. 4. 0	9. 25	·1101	16. 4	·02630			
13. 13	20. 31. 55	9. 30	·1111	16. 13	·02626			
	(†)	9. 37	·1111	16. 21	·02563			
13. 32	20. 25. 45	9. 44	·1140	16. 28	·02588			
13. 42	21. 6. 20	9. 54	·1145	16. 36	·02527			
13. 48	20. 58. 45	10. 1	·1090	16. 46	·02522			
14. 7	21. 9. 15	10. 6	·1083	17. 15	·02918			
14. 15	21. 7. 50	10. 14	·1097	17. 39	·03066			
14. 41	20. 38. 15	10. 17	·1083	18. 7	·03015			
14. 54	47. 0	10. 26	·1108	19. 45	·03034			
15. 1	46. 55	10. 32	·1086	20. 17	·03024			
15. 11	51. 0	10. 33	·1058	22. 1	·02918			
15. 18	48. 10	10. 43	·1082	22. 52	·02962			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 4		Aug. 4		Aug. 4				
h m	° ′ ″	h m		h m		h m	°	°
15. 35	21. 3. 55	10. 53	·1040	23. 0	·03000			
15. 43	0. 30	11. 6	·1080	23. 47	·03012			
16. 0	16. 55	11. 50	·1057	23. 52	·03057			
	(†)		(†)	23. 57	·03025			
16. 13	21. 16. 45	12. 4	·1041	23. 59	·03023			
16. 37	20. 55. 10	12. 14	·1028					
	***		(†)					
17. 0	21. 0. 0	12. 34	·1072					
17. 18	20. 57. 20	12. 48	·1142					
17. 22	21. 3. 0	13. 9	·1014					
17. 30	0. 30	13. 19	·1032					
17. 45	9. 50	13. 39	·1105					
17. 49	0. 0	13. 55	·1026					
18. 0	21. 7. 40		(†)					
18. 6	20. 59. 40	14. 18	·1020					
	***	14. 29	·1010					
18. 15	55. 10	14. 33	·1016					
18. 29	54. 55	14. 35	·1009					
	***		(†)					
19. 21	46. 10	15. 2	·0986					
	***	15. 15	·1013					
19. 49	55. 0	15. 19	·1010					
	***	15. 25	·1015					
20. 38	59. 55	15. 30	·1011					
21. 0	57. 45	15. 42	·1066					
21. 13	58. 45	15. 49	·1069					
	***	16. 0	·1062					
21. 37	58. 50	16. 21	·1014					
21. 54	55. 0		(†)					
22. 20	55. 0	16. 48	·0987					
22. 23	55. 40	17. 0	·1009					
22. 37	53. 50	17. 8	·1015					
22. 58	57. 10	17. 15	·1007					
23. 24	55. 0	17. 29	·1030					
23. 37	53. 35	17. 34	·1010					
23. 41	56. 0	17. 54	·1024					
23. 47	20. 51. 15	17. 57	·1012					
23. 59	21. 0. 0	18. 7	·1033					
		18. 19	·1006					
		18. 40	·1026					
		19. 2	·1030					
		19. 29	·1028					
		19. 40	·1032					
		19. 51	·1024					
		20. 0	·1033					
		20. 5	·1030					
		20. 11	·1036					
		20. 24	·1025					
		20. 32	·1028					
		20. 43	·1019					
		20. 51	·1025					
		21. 2	·1021					
		21. 50	·1022					
			(†)					
Aug. 5		Aug. 5		Aug. 5		Aug. 5		
0. 0	21. 0. 0		(†)	0. 0	·03023	1. 0	69 ·3	68 ·5
0. 3	20. 57. 40	0. 4	·1017	0. 2	·03027	3. 0	70 ·3	68 ·8

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

August 4. The trace of the Horizontal Force Magnet was off the sheet in the direction of diminishing force, from about $13^h.\ 57^m$ to $14^h.\ 7^m$, from $14^h.\ 45^m$ to $15^h\ 2^m$, and from $16^h.\ 30^m$ to $16^h.\ 48^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 5		Aug. 5		Aug. 5		Aug. 5		
h m	° ′ ″	h m		h m		h m	°	°
0. 20	21. 2. 5	0. 27	·1005	0. 8	·03002	9. 0	68·0	68·5
0. 28	1. 40	1. 3	·1090	0. 15	·03025	21. 0	61·8	60·8
0. 33	3. 0	1. 15	·1073	0. 48	·03050	22. 0	62·2	61·2
0. 57	1. 30	1. 20	·1095	1. 44	·03007	23. 0	63·3	62·5
1. 7	4. 0	1. 22	·1086	2. 4	·03082			
1. 18	3. 0	1. 28	·1070	2. 9	·03076			
1. 27	4. 50	1. 30	·1087	2. 13	·03108			
1. 32	1. 40	1. 32	·1069	2. 22	·03110			
1. 39	4. 5	1. 38	·1089	2. 45	·03172			
1. 46	1. 55	1. 39	·1075	3. 2	·03030			
1. 58	21. 4. 45	2. 15	·1167	3. 19	·02923			
2. 11	20. 58. 0	2. 16	·1162	4. 22	·02684			
2. 17	21. 0. 50	2. 23	·1203	4. 38	·02653			
2. 21	20. 57. 30	2. 33	·1162	4. 49	·02660			
2. 33	21. 5. 0	2. 43	·1181	5. 19	·02591			
2. 53	20. 48. 15	3. 13	·1080	5. 26	·02596			
3. 10	53. 0	3. 28	·1076	5. 45	·02563			
3. 14	52. 0	3. 32	·1078	6. 6	·02595			
3. 30	53. 10	3. 40	·1072	9. 48	·02626			
3. 44	55. 15	3. 49	·1076	11. 32	·02690			
3. 48	55. 10	4. 10	·1058	14. 1	·02852			
4. 3	56. 15	4. 20	·1068	15. 33	·02988			
4. 34	55. 0	4. 28	·1064	16. 0	·02922			
4. 42	56. 45	4. 41	·1086	18. 29	·02723			
4. 55	54. 20	4. 48	·1070	18. 47	·02692			
5. 18	55. 50	4. 50	·1078	19. 1	·02720			
	***	5. 2	·1064	19. 13	·02695			
5. 46	53. 20	5. 12	·1081	19. 31	·02708			
	***	5. 30	·1062	19. 46	·02622			
6. 24	54. 20	5. 37	·1072	20. 9	·02696			
	***	5. 44	·1070	20. 29	·02658			
6. 52	53. 25	5. 53	·1086	20. 54	·02680			
	***	5. 59	·1080	22. 51	·02637			
7. 48	56. 0	6. 3	·1082	22. 57	·02578			
	***	6. 27	·1063	23. 59	·02613			
11. 0	52. 0	6. 52	·1081					
11. 47	54. 0	7. 0	·1077					
12. 5	52. 0	7. 12	·1083					
12. 32	53. 55	7. 18	·1076					
13. 23	55. 10	7. 23	·1079					
14. 7	52. 0		***					
14. 32	51. 30	7. 47	·1078					
14. 47	52. 50	7. 58	·1070					
15. 10	51. 40	8. 3	·1077					
15. 51	52. 20	8. 9	·1074					
16. 3	50. 45	8. 15	·1077					
	***	8. 21	·1076					
18. 5	52. 45	8. 32	·1082					
18. 42	48. 10	8. 45	·1077					
19. 23	49. 0	8. 55	·1078					
19. 39	52. 30	9. 2	·1075					
20. 30	47. 45	9. 31	·1080					
20. 45	48. 0	9. 38	·1076					
21. 23	45. 40	9. 47	·1079					
22. 18	49. 0	10. 7	·1080					
22. 27	48. 25	10. 17	·1077					
	***	10. 34	·1081					
23. 7	53. 0	10. 46	·1078					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 5		Aug. 5						
h m	° ′ ″	h m		h m		h m	°	°
23. 23	20. 52. 15	10. 53	·1081					
23. 59	55. 0	11. 32	·1070					
		11. 47	·1072					
		12. 4	·1070					
		12. 20	·1070					
			***					
		13. 2	·1067					
		13. 54	·1072					
		14. 17	·1070					
		14. 49	·1073					
		15. 49	·1072					
		16. 24:	·1064					
		17. 13:	·1072					
		18. 3	·1058					
		18. 38	·1049					
		18. 53	·1058					
		19. 3	·1053					
		19. 19	·1058					
		19. 32	·1055					
		19. 41	·1058					
		20. 17	·1050					
		21. 24	·1071					
		21. 50	·1071					
		22. 17	·1066					
		22. 40	·1073					
		22. 55	·1060					
		23. 0	·1065					
		23. 23	·1049					
		23. 40	·1059					
		23. 59	·1071					
Aug. 6		Aug. 6		Aug. 6		Aug. 6		
0. 0	20. 55. 0	0. 0	·1073	0. 0	·02613	0. 0	64·0	63·6
0. 25	55. 20	0. 28	·1072	0. 58	·02630	1. 0	65·0	64·5
0. 30	54. 35	0. 49	·1091	1. 37	·02576	3. 0	66·3	65·8
0. 45	57. 50	1. 15	·1088	1. 50	·02594	6. 0	67·5	67·0
0. 57	56. 35	1. 21	·1073	3. 20	·02492	9. 22	66·2	66·2
1. 13	58. 15	1. 29	·1074	3. 26	·02474	12. 0	65·0	65·0
1. 18	58. 0	1. 37	·1062	4. 27	·02422	18. 0	62·3	62·8
1. 30	59. 0	1. 51	·1080	4. 39	·02440	21. 0	62·3	63·0
1. 43	56. 45	2. 9	·1059	5. 19	·02432	22. 0	62·5	63·4
1. 56	59. 10	2. 22	·1071	6. 43	·02220	23. 0	63·0	63·9
2. 8	57. 50	2. 24	·1064	7. 18	·02203			
3. 0	57. 35	2. 41	·1077	9. 50	·02248			
3. 15	58. 0	2. 54	·1074	12. 34	·02400			
3. 24	56. 50	3. 0	·1084	13. 26	·02414			
4. 11	55. 5	3. 15	·1095	15. 41	·02632			
4. 22	53. 0	3. 46	·1090	16. 22	·02645			
4. 35	45. 15	4. 14	·1104	16. 58	·02692			
4. 45	47. 0	4. 26	·1096	17. 16	·02661			
4. 53	46. 30	4. 43	·1134		·02606			
5. 9	50. 10	4. 53	·1125		***			
5. 49	49. 55	5. 3	·1122	21. 27	·02658			
	***	5. 21	·1095	23. 59	·02636			
7. 0	52. 20		***					
7. 12	51. 30	6. 4	·1092					
	***		***					
9. 14	53. 10	6. 12	·1086					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 6		Aug. 6						
h m	° ′ ″	h m		h m		h m	°	°
9. 23	20. 51. 15	6. 23	·1093					
			***					
10. 9	53. 30							
10. 21	52. 55	6. 34	·1087					
			***					
11. 6	53. 50							
11. 27	53. 0	6. 59	·1100					
11. 36	53. 30	7. 32	·1088					
11. 56	53. 0	8. 33	·1100					
12. 18	54. 35	8. 47	·1105					
12. 41	20. 54. 0	8. 59	·1098					
13. 15	21. 0. 10	9. 15	·1104					
13. 50	20. 51. 0	9. 37	·1096					
			***					
14. 45	50. 55							
14. 52	52. 0	10. 21	·1094					
			***					
15. 15	52. 0							
15. 30	50. 10	11. 48	·1094					
			***					
15. 40	51. 15							
16. 3	52. 0	12. 3	·1098					
			***					
16. 9	53. 0							
16. 35	58. 25	12. 40	·1094					
			***					
16. 48	55. 10							
17. 13	53. 10	13. 1	·1095					
			***					
17. 30	57. 30							
17. 38	57. 10	13. 26	·1090					
			***					
17. 50	57. 35							
18. 27	51. 0	13. 40	·1091					
			***					
19. 0	56. 0							
19. 43	52. 35	14. 4	·1088					
20. 7	53. 0	14. 45	·1088					
20. 39	51. 0	14. 54	·1093					
			***					
21. 0	50. 50							
21. 30	53. 0	15. 31	·1089					
21. 42	52. 30	15. 58	·1083					
22. 14	54. 25	16. 18	·1070					
			***					
22. 20	53. 50							
23. 38	58. 30	17. 7	·1084					
23. 57	57. 5	17. 16	·1089					
			***					
23. 59	57. 10							
		17. 38	·1092					
		17. 52	·1086					
		18. 23	·1081					
			***					
		18. 40	·1084					
			***					
		19. 0	·1082					
		19. 5	·1077					
		19. 32	·1074					
		19. 41	·1069					
		20. 26	·1072					
			***					
		21. 53	·1072					
		22. 9	·1061					
		22. 19	·1060					
		22. 41	·1080					
		22. 50	·1070					
		23. 0	·1071					
		23. 10	·1067					
		23. 29	·1079					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 7		Aug. 7		Aug. 7		Aug. 7		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 57. 10		(†)	0. 0	·02636	0. 0	64 ·0	64 ·2
0. 15	58. 20	0. 45	·1082	3. 21	·02565	1. 0	65 ·1	65 ·0
0. 57	57. 10	1. 31	·1094	4. 9	·02570	3. 0	66 ·3	65 ·8
			***					
1. 59	58. 0			5. 32	·02506	9. 0	65 ·2	65 ·3
2. 11	59. 5	1. 49	·1091	6. 17	·02510	21. 0	61 ·0	60 ·0
2. 22	58. 10		(†)	8. 7	·02452			
2. 33	58. 25	3. 0	·1134*	10. 22	·02494			
2. 42	58. 40	5. 32	·1106	11. 37	·02557			
3. 6	57. 45	5. 49	·1116	11. 54	·02528			
3. 27	52. 30	6. 2	·1114	12. 15	·02530			
3. 40	53. 40	6. 45	·1101	13. 26	·02618			
4. 5	50. 45	7. 17	·1101	14. 10	·02608			
			***					
4. 59	52. 40			14. 23	·02580			
5. 50	52. 15	7. 28	·1104	14. 42	·02596			
			***					
6. 25	50. 25			14. 48	·02580			
7. 29	53. 0	8. 9	·1104	14. 58	·02577			
7. 36	52. 20	8. 29	·1106	15. 18	·02614			
			***		·02545			
8. 24	52. 0							
8. 30	54. 0	9. 13	·1106	16. 7	·02668			
			***		·02626			
9. 14	53. 0							
9. 51	52. 50	9. 52	·1108	16. 54	·02677			
10. 14	54. 0	10. 6	·1111		·02648			
			***					
11. 0	49. 0			17. 33	·02707			
11. 18	50. 0	10. 25	·1106		·02680			
			***		***			
11. 37	53. 0							
11. 44	51. 50	10. 45	·1107	19. 56	·02742			
11. 47	52. 40	11. 18	·1102	22. 40	·02720			
12. 0	50. 10	11. 30	·1110	23. 21	·02677			
12. 9	50. 30	11. 37	·1134		(†)			
12. 30	47. 45	11. 49	·1124					
			***					
13. 30	49. 15							
13. 46	52. 35	12. 30	·1103					
13. 54	52. 30	12. 42	·1103					
14. 15	58. 35	12. 52	·1097					
14. 31	55. 10	12. 59	·1098					
14. 41	55. 15	13. 4	·1102					
			***					
15. 22	45. 25							
15. 35	45. 15	13. 30	·1105					
15. 45	46. 45	14. 2	·1080					
	***	14. 9	·1084					
16. 24	45. 50	14. 17	·1084					
16. 59	48. 50	14. 37	·1108					
17. 18	46. 55	14. 46	·1112					
18. 14	47. 50	14. 48	·1112					
18. 30	44. 40	15. 8	·1100					
			***					
18. 56	51. 5							
19. 4	48. 10	15. 23	·1097					
19. 24	49. 0	15. 29	·1091					
19. 36	46. 25	15. 40	·1096					
19. 53	47. 25	15. 56	·1106					
			***					
20. 20	51. 10							
20. 36	49. 40	16. 19	·1108					
			***					
20. 52	53. 25							
21. 23	53. 15	17. 12	·1091					
21. 32	51. 30	17. 15	·1094					
22. 0	54. 25	17. 23	·1088					
22. 13	53. 40	17. 32	·1092					
22. 21	54. 30	18. 17	·1074					
	***							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 7		Aug. 7						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 54. 0	18. 30	·1078					
		19. 2	·1058					
		19. 15	·1069					
		19. 30	·1062					
		20. 9	·1062					
		20. 20	·1053					
		20. 33	·1054					
		20. 45	·1066					
		20. 50	·1055					
		20. 52	·1066					
		21. 4	·1055					
		21. 10	·1068					
		21. 53	·1084					
		22. 0	·1082					
		22. 15	·1088					
		22. 21	·1088					
		23. 7	·1097					
			***					
		23. 33	·1097					
		23. 59	·1108					
Aug. 8		Aug. 8		Aug. 8		Aug. 8		
0. 0	20. 54. 5	0. 0	·1111	0. 0	·02764	1. 0	63·3	63·2
0. 19	55. 0	0. 14	·1113	2. 34	·02653	3. 0	64·2	63·5
1. 4	55. 40	0. 19	·1110	4. 5	·02616	9. 0	64·0	64·0
1. 30	55. 10	1. 1	·1109	6. 10	·02460	21. 0	60·0	60·2
1. 47	56. 20	1. 45	·1106	8. 9	·02452			
3. 26	53. 25	1. 59	·1111	8. 53	·02440			
3. 36	54. 10	2. 31	·1105	11. 19	·02526			
4. 0	52. 40		***	12. 2	·02530			
4. 27	50. 15	2. 56	·1098	12. 37	·02401			
4. 39	50. 45		***	13. 17	·02410			
4. 50	49. 50	3. 9	·1098	13. 50	·02542			
5. 23	49. 10	3. 21	·1103	14. 0	·02550			
6. 15	51. 50	3. 34	·1101	14. 50	·02690			
6. 52	50. 30	3. 46	·1105	15. 43	·02745			
7. 3	51. 45	3. 55	·1100		·02695			
7. 13	50. 25	4. 2	·1100	16. 7	·02690			
7. 30	51. 35	4. 26	·1094	16. 31	·02714			
8. 0	46. 15	4. 40	·1096	16. 51	·02700			
8. 24	50. 5	4. 48	·1107		·02657			
8. 57	48. 10	5. 2	·1102	17. 57	·02742			
9. 39	52. 20		***		·02710			
9. 55	52. 10	5. 36	·1102	19. 4	·02758			
10. 14	55. 0	6. 0	·1105		·02732			
10. 28	52. 50	6. 8	·1104	21. 30	·02794			
11. 15	52. 30	6. 17	·1110		·02745			
11. 29	54. 45	6. 23	·1110	23. 59	·02738			
11. 49	54. 0	6. 49	·1128					
12. 16	50. 10	7. 20	·1108					
12. 20	20. 59. 45	7. 32	·1117					
12. 27	21. 2. 50	7. 57	·1106					
12. 52	20. 53. 20	8. 22	·1114					
13. 0	57. 0	8. 43	·1108					
13. 45	48. 25	9. 4	·1118					
13. 50	48. 50	9. 47	·1112					
13. 53	43. 50	10. 11	·1124					
14. 3	47. 25	10. 21	·1111					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 8		Aug. 8						
h m	° ′ ″	h m		h m		h m	°	°
15. 3	20. 53. 35	10. 41	·1110					
15. 14	52. 55	10. 55	·1113					
15. 36	56. 15	11. 5	·1108					
15. 52	54. 25	11. 22	·1114					
16. 30	57. 55	11. 47	·1108					
17. 21	49. 10	11. 53	·1112					
18. 2	48. 30	12. 4	·1114					
18. 27	50. 45	12. 35	·1074					
18. 36	48. 30	12. 51	·1093					
18. 48	49. 20	13. 3	·1082					
18. 55	47. 0	13. 23	·1079					
18. 59	49. 45	13. 45	·1100					
19. 4	49. 15	14. 0	·1092					
19. 8	52. 35	14. 15	·1090					
19. 15	48. 35	14. 42	·1085					
19. 19	50. 15	15. 3	·1094					
19. 44	50. 45	15. 10	·1094					
20. 2	48. 20	15. 33	·1102					
20. 28	47. 25	15. 52	·1098					
20. 34	48. 35	16. 3	·1099					
21. 6	49. 30	16. 32	·1094					
21. 15	52. 0	16. 55	·1101					
	***	17. 34	·1096					
21. 27	52. 50	17. 39	·1100					
21. 33	52. 5	18. 32	·1096					
22. 6	53. 25	18. 34	·1092					
22. 16	52. 50	18. 50	·1092					
22. 25	53. 50	19. 32	·1085					
22. 50	54. 0	20. 4	·1076					
22. 57	54. 50	20. 38	·1072					
23. 4	53. 55	21. 7	·1077					
	***	21. 41	·1073					
23. 59	54. 30	22. 9	·1076					
		22. 26	·1065					
		22. 40	·1075					
		22. 48	·1075					
		22. 57	·1088					
		23. 12	·1083					
		23. 28	·1092					
		23. 38	·1090					
		23. 53	·1094					
		23. 59	·1099					
Aug. 9		Aug. 9		Aug. 9		Aug. 9		
0. 0	20. 54. 35	0. 0	·1099	0. 0	·02738	1. 0	62·0	62·8
0. 24	53. 50	0. 4	·1104	1. 4	·02717	3. 0	62·8	64·5
0. 35	51. 40	0. 15	·1100	1. 19	·02728	9. 0	64·5	64·5
1. 19	51. 25	0. 22	·1103	2. 17	·02680	21. 0	58·3	59·0
1. 42	48. 45	0. 31	·1103	4. 3	·02490			
1. 46	49. 0	1. 1	·1112	5. 9	·02434			
2. 17	45. 0	1. 7	·1108	6. 21	·02343			
2. 28	46. 30		***	8. 0	·02435			
3. 0	45. 15	1. 48	·1126	8. 12	·02433			
3. 20	47. 10	1. 50	·1123	8. 35	·02452			
3. 35	46. 50	2. 1	·1130	8. 45	·02440			
	***	2. 16	·1115	9. 18	·02428			
4. 22	48. 0	2. 19	·1122	11. 53	·02470			
4. 46	47. 25	2. 41	·1109	12. 19	·02420			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 9		Aug. 9		Aug. 9		h m	°	°
h m	° ′ ″	h m		h m				
4. 57	20. 46. 10	3. 3	·1112	12. 47	·02465			
5. 6	47. 0	3. 11	·1116	15. 16	·02634			
5. 17	44. 10	3. 16	·1113	16. 10	·02660			
5. 28	45. 45	3. 23	·1119	16. 36	·02664			
5. 39	44. 55	3. 47	·1109	19. 34	·02945			
7. 3	49. 0	3. 58	·1110	19. 41	·02928			
7. 45	48. 0	4. 3	·1104	20. 35	·02853			
8. 14	48. 55	4. 22	·1125	21. 47	·02802			
8. 30	45. 10	4. 28	·1125	21. 52	·02810			
8. 45	52. 0	4. 37	·1130	22. 58	·02760			
9. 0	49. 50	4. 57	·1110		·02712			
9. 12	52. 5	5. 5	·1118	23. 59	·02688			
9. 51	47. 10	5. 13	·1106					
10. 40	49. 20	5. 22	·1112					
11. 13	49. 30	5. 32	·1102					
11. 40	47. 50	5. 45	·1112					
11. 48	50. 0	6. 1	·1110					
13. 3	51. 10	6. 13	·1104					
13. 16	49. 20	6. 25	·1108					
15. 16	50. 0	6. 38	·1106					
15. 25	50. 30	7. 7	·1110					
16. 2	49. 10	7. 12	·1107					
16. 30	55. 10	7. 19	·1112					
16. 44	54. 0	7. 43	·1112					
16. 50	54. 30	7. 56	·1117					
17. 25	49. 50	8. 2	·1111					
	***	8. 16	·1093					
18. 20	48. 0	8. 36	·1120					
18. 38	45. 10	8. 40	·1109					
18. 48	45. 10	8. 52	·1114					
19. 2	44. 10	9. 15	·1102					
19. 13	45. 50	9. 37	·1099					
19. 20	45. 30	9. 50	·1106					
19. 46	47. 50	9. 58	·1103					
20. 0	47. 10	10. 5	·1105					
20. 28	48. 20	10. 20	·1102					
20. 45	46. 30	10. 42	·1106					
21. 2	48. 5	10. 47	·1104					
21. 16	47. 50	11. 0	·1109					
21. 30	48. 50	11. 37	·1105					
21. 40	49. 5	11. 52	·1122					
21. 53	51. 25	12. 17	·1094					
22. 40	52. 0	12. 38	·1097					
22. 51	51. 10	12. 47	·1101					
	***	12. 52	·1098					
23. 18	53. 10	13. 58	·1104					
23. 37	52. 50	14. 3	·1102					
23. 43	53. 10	14. 11	·1106					
23. 52	52. 0	14. 15	·1103					
23. 59	52. 40	14. 28	·1104					
		14. 45	·1102					
		15. 2	·1104					
		15. 40	·1102					
		15. 51	·1103					
		16. 0	·1101					
		16. 15	·1110					
		16. 37	·1118					
		16. 41	·1115					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 10		Aug. 10		Aug. 10		Aug. 10		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 52. 45	0. 0	·1095	0. 0	·02688	8. 47	64 ·2	64 ·6
0. 15	52. 35	0. 8	·1094	2. 6	·02662	21. 0	61 ·5	61 ·8
0. 54	54. 10	0. 22	·1088	4. 6	·02543			
1. 27	52. 10	0. 45	·1112	4. 15	·02512			
1. 50	53. 30	0. 52	·1112	6. 0	·02318			
2. 0	53. 10	1. 15	·1100	6. 26	·02328			
2. 21	53. 50	2. 27	·1123	6. 37	·02360			
2. 30	53. 0	2. 54	·1109	6. 58	·02344			
2. 35	53. 20	3. 4	·1116	9. 24	·02393			
2. 56	50. 10	3. 22	·1110	11. 12	·02390			
3. 12	50. 15	3. 35	·1113	14. 32	·02457			
3. 37	49. 10	4. 3	·1139	21. 45	·02720			
3. 49	49. 45	4. 15	·1118	23. 59	·02692			
4. 11	47. 0	4. 34	·1108					
4. 41	48. 10	4. 45	·1109					
5. 9	47. 20	5. 3	·1106					
5. 40	48. 15	5. 19	·1108					
6. 4	47. 45	5. 39	·1119					
6. 30	42. 20	5. 50	·1118					
6. 50	49. 5	6. 10	·1122					
7. 6	49. 15	6. 24	·1104					
7. 51	50. 55	6. 40	·1129					
7. 58	52. 0	7. 6	·1100					
8. 29	50. 25	7. 54	·1104					
9. 14	52. 20	8. 14	·1112					
9. 25	52. 0	8. 22	·1109					
10. 3	52. 10	8. 57	·1108					
10. 30	53. 10	9. 11	·1104					
11. 0	52. 0	9. 34	·1110					
12. 30	52. 0	9. 49	·1105					
	(†)							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 10		Aug. 10						
h m	° ′ ″	h m		h m		h m	°	°
13. 45	20. 51. 50	10. 4	·1108					
14. 32	53. 15	10. 19	·1105					
16. 10	50. 0	10. 37	·1114					
16. 50	51. 10	10. 49	·1108					
17. 34	48. 45	11. 19	·1105					
17. 41	49. 25	11. 29	·1107					
17. 52	49. 0	12. 1	·1102					
18. 0	49. 45	12. 22	·1106					
19. 33	45. 20	12. 43	·1103					
21. 0	47. 0	13. 41	·1107					
21. 27	46. 0	13. 58	·1103					
21. 43	48. 5	14. 19	·1105					
21. 58	47. 35	14. 40	·1102					
22. 46	48. 55	14. 48	·1102					
23. 32	51. 55	15. 11	·1100					
23. 59	52. 10	15. 30	·1102					
		16. 10	·1100					
		16. 51	·1102					
		17. 33	·1090					
		18. 0	·1088					
		18. 20	·1093					
		18. 34	·1091					
		18. 46	·1094					
		20. 22	·1081					
		21. 30	·1070					
		21. 53	·1069					
		22. 14	·1072					
		22. 33	·1074					
		22. 38	·1073					
		22. 58	·1077					
		23. 59	·1086					
Aug. 11		Aug. 11		Aug. 11		Aug. 11		
0. 0	20. 52. 20	0. 0	·1086	0. 0	·02692	1. 0	62 ·6	63 ·5
0. 27	52. 45	0. 15	·1091	0. 27	·02695	3. 0	63 ·2	64 ·0
1. 18	54. 30	0. 31	·1091	3. 15	·02594	9. 5	65 ·0	65 ·3
1. 30	54. 0	0. 46	·1096	6. 2	·02377	21. 0	60 ·6	60 ·9
2. 0	54. 30	0. 53	·1094	6. 15	·02406			
2. 28	53. 0	1. 21	·1096	8. 57	·02477			
3. 50	51. 10	1. 49	·1107	13. 54:	·02610			
5. 21	47. 0	1. 56	·1106	19. 52	·03022			
6. 55	47. 10	2. 5	·1109	20. 30	·03045			
8. 18	50. 10	2. 32	·1101	22. 20	·02925			
12. 53	51. 5	3. 15	·1107	23. 59	·02828			
13. 42	52. 0	3. 34	·1105					
13. 53	53. 0	3. 53	·1109					
14. 17	52. 0	4. 22	·1108					
16. 2	51. 0	4. 36	·1113					
16. 30	51. 20	5. 15:	·1106					
17. 5	50. 20	5. 50	·1109					
17. 25	51. 0	6. 29	·1106					
17. 56	49. 20	6. 40	·1109					
18. 23	49. 10	7. 45	·1105					
18. 36	50. 10	9. 22	·1108					
19. 10	49. 25	10. 21	·1109					
20. 0	45. 40	10. 52	·1106					
22. 28	46. 30	12. 43	·1106					
23. 17	51. 10	12. 52	·1103					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 11		Aug. 11						
h m	° ′ ″	h m		h m		h m	°	°
23. 53	20. 52. 0	13. 6	·1107					
23. 59	52. 25	13. 49	·1100					
		14. 11	·1104					
		15. 19	·1106					
		16. 15	·1108					
		16. 38	·1104					
		16. 58	·1106					
		17. 21	·1105					
		17. 34	·1107					
		17. 45	·1102					
		17. 55	·1104					
		19. 0	·1100					
		19. 41	·1088					
		20. 47	·1079					
		21. 24	·1078					
		21. 47	·1085					
		22. 11	·1083					
		22. 46	·1085					
		23. 17	·1090					
		23. 25	·1082					
		23. 59	·1083					
Aug. 12		Aug. 12		Aug. 12		Aug. 12		
0. 0	20. 52. 30	0. 0	·1083	0. 0	·02828	1. 0	64 ·4	64 ·3
0. 22	53. 30	0. 7	·1083	1. 22	·02724	3. 0	66 ·7	66 ·5
0. 36	53. 0	1. 40	·1100	5. 27	·02346	9. 0	67 ·9	67 ·9
1. 18	55. 55	2. 22	·1100	6. 9	·02410	21. 0	61 ·4	61 ·0
2. 12	56. 15	2. 45	·1088	9. 12	·02563	22. 0	62 ·0	61 ·5
2. 20	55. 25	3. 8	·1106	10. 30	·02587	23. 0	62 ·9	62 ·2
	***	3. 17	·1105	12. 53	·02727			
3. 40	54. 0	3. 25	·1110	17. 29	·03188			
3. 50	55. 5	3. 37	·1106	18. 52	·03037			
6. 38	51. 5		***	21. 54	·02788			
9. 30	51. 5	3. 52	·1116	22. 23	{·02770			
9. 57	50. 30	4. 23	·1106		·02688			
10. 15	51. 35	5. 13	·1099	23. 59	·02664			
10. 57	49. 30	6. 7:	·1109					
11. 47	51. 25	7. 17	·1107					
12. 3	53. 25	7. 25	·1109					
	***	7. 47	·1106					
16. 4	51. 25	8. 37	·1107					
16. 32	50. 10	8. 46	·1106					
17. 15	50. 30	9. 0	·1110					
17. 35	53. 15	9. 32	·1109					
17. 48	52. 45	10. 3	·1103					
	***	10. 19	·1112					
18. 37	53. 20	10. 37	·1107					
19. 50	52. 5	11. 5	·1104					
20. 3	52. 10	11. 52	·1107					
20. 16	53. 25	12. 6	·1112					
20. 22	53. 5	12. 17	·1110					
20. 34	53. 50	12. 36	·1112					
20. 43	53. 10	12. 54	·1108					
21. 44	53. 0	13. 10	·1107					
22. 28	54. 35	13. 22	·1110					
22. 42	54. 10	14. 4	·1104					
23. 38	57. 5	15. 20	·1108					
23. 59	57. 0	15. 33	·1104					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug. 12 h m		h m		h m	°	°
		16. 27	·1103					
		17. 33	·1096					
		18. 0	·1100					
		18. 22	·1095					
		18. 33	·1094					
		19. 0	·1082					
		20. 8	·1078					
		20. 27	·1075					
		20. 48	·1076					
		20. 58	·1081					
		21. 21	·1080					
		22. 17	·1076					
		22. 48	·1079					
		23. 4	·1087					
		23. 15	·1083					
		23. 52	·1095					
		23. 59	·1094					
Aug. 13		Aug. 13		Aug. 13		Aug. 13		
0. 0	20. 57. 0	0. 0	·1094	0. 0	·02664	0. 0	63·9	63·4
1. 30	57. 0	0. 3	·1092	2. 45	·02516	1. 0	64·9	64·4
1. 54	58. 5		(†)	3. 13	·02470	2. 0	66·1	65·4
4. 45	54. 55	0. 48	·1092	5. 11	·02348	3. 0	67·0	66·5
4. 52	55. 10	1. 0	·1092	5. 32	·02355	6. 0	69·0	68·3
5. 4	52. 30	1. 7	·1093	6. 8	·02330	9. 0	68·7	68·2
5. 43	48. 30	1. 20	·1097	6. 20	·02298	12. 0	67·2	67·0
5. 47	49. 0	1. 30	·1092	6. 35	·02305	18. 0	63·8	64·1
5. 57	48. 25	1. 37	·1100	6. 43	·02336	21. 0	63·2	63·8
6. 21	54. 0		***	7. 55	·02377	22. 0	63·5	63·8
6. 45	48. 55	3. 59	·1101	9. 27	·02400	23. 0	63·8	64·0
7. 6	51. 0	4. 2	·1106	9. 45	·02366			
7. 43	48. 35	4. 5	·1099	9. 52	·02387			
8. 17	51. 0	4. 31	·1110	11. 24	·02330			
	***	4. 35	·1104	12. 0	·02336			
9. 16	51. 5	4. 45	·1108	12. 23	·02374			
9. 37	37. 50	4. 55	·1104	12. 34	·02367			
9. 56	43. 0	5. 10	·1114	14. 42	·02454			
10. 20	47. 5	5. 16	·1111	15. 12	·02443			
10. 52	45. 25	5. 25	·1115	17. 18	02590			
11. 4	47. 0	5. 41	·1103	18. 47	·02768			
11. 25	43. 40	5. 47	·1103	21. 17	·02967			
11. 37	43. 0	5. 59	·1104	22. 39	·02873			
11. 47	43. 30	6. 4	·1104	23. 59	·02854			
12. 42	38. 45	6. 20	·1122					
13. 37	38. 0	6. 24	·1117					
14. 13	44. 0	6. 35	·1133					
14. 21	43. 25	7. 0	·1097					
14. 41	49. 10	7. 14	·1118					
14. 58	47. 0	7. 17	·1113					
15. 17	42. 45	7. 26	·1114					
15. 54	45. 50	7. 47	·1102					
16. 9	45. 50	8. 4	·1113					
16. 45	51. 20	8. 13	·1110					
17. 28	46. 0	8. 21	·1095					
18. 23	47. 30	8. 34	·1096					
18. 33	48. 30	8. 46	·1107					
19. 39	47. 55	9. 0	·1100					
20. 22	49. 0	9. 8	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 13 h m	° ′ ″	Aug. 13 h m		h m		h m	°	°
20. 50	20. 48. 30	9. 21	·1100					
21. 25	50. 30	9. 31	·1101					
21. 58	50. 0	9. 41	·1110					
23. 59	56. 10	9. 51	·1111					
		9. 58	·1097					
		10. 2	·1101					
		10. 15:	·1103					
		10. 45	·1094					
		10. 50	·1093					
		11. 0	·1086					
		11. 19	·1088					
		12. 2	·1068					
		12. 33	·1081					
		12. 45	·1072					
		12. 53	·1079					
		13. 14	·1080					
		13. 53	·1069					
		14. 18	·1067					
		14. 52	·1073					
		15. 0	·1071					
		15. 37	·1096					
		16. 3	·1090					
		16. 38	·1100					
		16. 48	·1098					
		16. 54	·1103					
		17. 2	·1100					
		17. 13	·1101					
		17. 47	·1090					
		18. 11	·1088					
		18. 40	·1088					
		19. 57	·1079					
		20. 37	·1069					
		21. 52	·1060					
		22. 1	·1062					
		22. 42	·1066					
		23. 31	·1078					
		23. 59	·1091					
Aug. 14		Aug. 14		Aug. 14		Aug. 14		
0. 0	20. 56. 15	0. 0	·1091	0. 0	·02854	0. 0	64·3	64·5
0. 13	56. 25		(†)	1. 48	·02878	1. 0	64·9	65·0
	(†)	1. 0	·1093*		·02824	2. 0	65·5	65·5
1. 0	20. 58. 8*	2. 22	·1094	4. 53	·02820	3. 0	66·1	66·0
3. 0	21. 2. 2*	2. 32	·1101	5. 3	·02807	9. 14	66·0	66·2
3. 39	0. 10	2. 42	·1093	5. 37	·02810	21. 0	61·5	61·7
3. 53	2. 10	3. 5	·1122	5. 47	·02835			
4. 11	0. 50	3. 25	·1108	5. 54	·02820			
4. 15	21. 1. 0	3. 40	·1116	6. 9	·02805			
4. 30	20. 58. 10	3. 47	·1111	6. 24	·02820			
4. 39	59. 15	4. 11	·1128	6. 32	·02800			
4. 48	58. 35	4. 32	·1114	6. 45	·02788			
5. 0	59. 50	4. 47	·1113	6. 54	·02760			
5. 15	20. 58. 40	5. 7	·1124	8. 10	·02693			
5. 30	21. 0. 0	5. 17	·1116	10. 56	·02760			
5. 47	20. 52. 35	5. 27	·1123	12. 50	·02852			
5. 52	53. 0	5. 31	·1119	14. 12	·02940			
6. 9	47. 10	5. 40	·1125		·02878			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Aug. 14 h m	° ′ ″
6. 13	20. 47. 20
6. 29	38. 40
6. 34	45. 45
6. 44	46. 40
6. 52	53. 40
7. 8	49. 50
7. 19	51. 0
7. 32	50. 0
7. 40	50. 40
7. 45	50. 10
8. 12	52. 50
8. 27	51. 35
8. 48	53. 15
9. 2	52. 10
9. 35	53. 45
10. 6	51. 0
11. 2	52. 40
11. 39	50. 50
12. 6	52. 50
12. 27	52. 0
12. 39	53. 0
12. 49	50. 55
13. 6	52. 10
13. 15	51. 35
14. 25	50. 55
14. 58	50. 40
18. 15	50. 45
18. 31	50. 0
18. 48	50. 55
19. 0	50. 0
	(†)
21. 0	50. 48*
23. 32	54. 45
23. 59	56. 0
Aug. 15	
0. 0	20. 56. 10
1. 30	58. 0
1. 56	56. 35
2. 17	57. 20
6. 27	51. 50
13. 0	50. 0
15. 30	51. 50
17. 50	50. 0
18. 0	49. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 14 h m	
5. 49	·1118
6. 0	·1140
6. 6	·1129
6. 9	·1134
6. 24	·1117
6. 37	·1155
6. 47	·1146
6. 52	·1149
7. 6	·1117
7. 16	·1116
7. 32	·1107
7. 39	·1110
7. 49	·1105
8. 6	·1114
8. 17	·1102
8. 32	·1105
8. 38	·1102
8. 45	·1105
8. 53	·1102
9. 10	·1108
10. 1	·1097
10. 23	·1105
10. 38	·1105
10. 46	·1100
11. 2	·1106
11. 34	·1099
11. 55	·1107
12. 31	·1109
12. 42	·1096
12. 54	·1103
13. 15	·1100
13. 50	·1104
13. 55	·1102
14. 7	·1109
14. 23	·1106
16. 23	·1109
17. 23	·1108
18. 23	·1110
19. 5	·1106
20. 21	·1101
22. 0	·1090
22. 25	·1096
22. 42	·1095
22. 49	·1100
23. 0	·1097
23. 30	·1100
23. 59	·1087
Aug. 15	
0. 0	·1087
1. 30	·1098
1. 36	·1102
1. 49	·1096
2. 19	·1093
2. 25	·1099
2. 30	·1093
2. 34	·1097
3. 3	·1101

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 14 h m	
15. 20	·02936
	·02878
16. 26	·02948
	·02900
17. 28	·02962
	·02922
18. 17	·02971
	·02932
19. 16	·02972
	·02933
20. 27	·02960
	·02920
21. 41	·02948
	·02906
22. 45	·02908
23. 31	·02885
	(†)
Aug. 15	
	(†)
1. 0	·02258*
1. 38	·02243
2. 24	·02266
	·02330
3. 14	·02322
4. 50	·02393
9. 33	·02422
11. 31	·02490

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Aug. 15		
1. 0	63·8	64·0
3. 0	64·9	64·8
9. 0	64·5	65·5
21. 0	60·6	60·6

Greenwich Mean Solar Time.	Western Declination.
Aug. 15 h m	° ′ ″
18. 9	20. 50. 10
19. 15	48. 20
19. 27	48. 50
19. 42	47. 50
19. 52	46. 25
20. 18	48. 0
20. 33	47. 45
21. 30	50. 30
21. 39	50. 15
23. 35	56. 0
23. 59	55. 50
Aug. 16	
0. 0	20. 55. 50
1. 28	57. 10
1. 49	57. 35
2. 24	55. 30
4. 7	52. 30
4. 31	52. 40
5. 26	50. 20
7. 39	50. 15
8. 6	48. 0
8. 39	47. 35
9. 2	49. 15
	***
12. 29	49. 30
13. 16	51. 10
13. 44	49. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 15 h m	
3. 23	·1099
4. 26	·1103
4. 33	·1100
4. 47	·1102
4. 56	·1109
5. 14	·1102
5. 30	·1107
5. 40	·1102
5. 51	·1101
	***
6. 30	·1107
6. 38	·1106
	***
7. 28	·1107
7. 34	·1109
7. 51	·1106
8. 35	·1105
8. 50	·1102
9. 0	·1106
9. 4	·1103
9. 31	·1107
9. 51	·1103
10. 10	·1107
10. 22	·1103
11. 1	·1102
11. 7	·1105
11. 30	·1102
11. 52	·1106
12. 19	·1103
13. 29	·1105
15. 16	·1103
15. 43	·1106
16. 37	·1104
17. 9	·1106
17. 50	·1104
17. 58	·1104
21. 20	·1083
22. 9	·1085
23. 32	·1095
23. 45	·1091
23. 59	·1094
Aug. 16	
0. 0	·1094
0. 30	·1094
	(†)
1. 0	·1099*
2. 18	·1098
2. 38	·1094
3. 10	·1098
	***
3. 23	·1095
	***
4. 1	·1098
	***
4. 45	·1108
	***
5. 20	·1098
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 15 h m	
14. 39	·02677
	·02596
15. 36	·02674
	·02612
16. 34	·02695
	·02648
17. 28	·02702
	·02650
18. 20	·02698
	·02657
19. 27	·02718
	·02676
20. 42	·02703
	·02648
21. 52	·02658
	·02573
23. 50	·02517
	(†)
Aug. 16	
	(†)
0. 45	·02462
5. 54	·02670
7. 33	·02688
	·02792
9. 42	·02778
14. 28	·02922
17. 43	·03043
20. 27	·03074
	(†)
21. 0	·03082*
22. 31	·03052
23. 59	·03068

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Aug. 16		
1. 0	63·4	63·3
3. 0	64·2	64·7
9. 0	63·8	64·7
21. 0	61·1	61·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 16.		Aug. 16						
h m	° ′ ″	h m		h m		h m	°	°
14. 23	20. 49. 0	5. 32	·1100					
15. 3	50. 10		***					
16. 57	50. 0	6. 25	·1112					
17. 14	49. 0		***					
18. 44	49. 0	6. 47	·1106					
19. 0	48. 10		***					
19. 30	49. 10	7. 17	·1112					
19. 50	48. 30		***					
20. 45	50. 20	8. 21	·1116					
20. 53	50. 0	9. 6	·1113					
20. 56	50. 10	9. 20	·1113					
21. 21	51. 45	9. 48	·1108					
21. 35	51. 35	10. 49	·1108					
	(†)	11. 27	·1111					
22. 37	53. 0	12. 0	·1109					
23. 59	56. 45	13. 7	·1112					
		13. 30	·1115					
		14. 0	·1113					
		15. 20	·1113					
		17. 32	·1107					
		19. 30	·1103					
		20. 7	·1100					
		20. 22	·1099					
		21. 34	·1094					
			(†)					
Aug. 17.		Aug. 17.		Aug. 17.		Aug. 17.		
0. 0	20. 56. 55		(†)	0. 0	·03068	9. 3	62·1	62·6
5. 35	51. 30	0. 38	·1090	2. 10	·03100	21. 0	59·8	60·8
7. 29	52. 10	0. 53	·1094	8. 5	·03118			
8. 27	50. 30	1. 7	·1093	12. 6	·03154			
9. 15	52. 10	1. 19	·1095	14. 27	·03208			
14. 30	50. 10	2. 43	·1099		·03125			
14. 53	50. 30	2. 59	·1102	19. 10	·03256			
17. 44	48. 25	3. 34	·1103		·03174			
18. 24	46. 15	3. 48	·1106	23. 59	·03203			
19. 53	46. 10	4. 34	·1106					
21. 35	50. 0	4. 46	·1108					
22. 44	56. 5	5. 26	·1107					
23. 59	59. 0	5. 52	·1110					
		6. 4	·1110					
		6. 30	·1114					
		6. 49	·1118					
		7. 5	·1117					
		7. 23	·1119					
		7. 44	·1116					
		8. 3	·1115					
		8. 17	·1117					
		9. 4	·1110					
		9. 23	·1110					
		9. 32	·1109					
		10. 15	·1110					
		11. 29	·1109					
		13. 56	·1109					
		14. 4	·1111					
		15. 0	·1108					
		15. 33	·1109					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Aug. 17						
h m	° ′ ″	h m		h m		h m	°	°
		16. 55	·1106					
		17. 41	·1107					
		18. 38	·1104					
		18. 52	·1103					
		21. 0	·1090					
		21. 18	·1090					
		21. 36	·1088					
		21. 55	·1089					
		22. 7	·1087					
		22. 53	·1096					
		23. 9	·1097					
		23. 59	·1104					
Aug. 18.		Aug. 18.		Aug. 18.		Aug. 18.		
0. 0	20. 59. 0	0. 0	·1104	0. 0	·03203	1. 0	60·9	61·2
0. 8	59. 0		(†)	1. 39	·03192	3. 0	62·0	62·0
	(†)	0. 57	·1112		·02838	9. 0	63·0	63·2
1. 0	59. 7*	1. 30	·1108	5. 53	·02997	21. 0	59·0	58·9
3. 0	53. 51*	2. 25	·1120	9. 20	·03160			
4. 0	52. 50	2. 35	·1117	10. 21	·03162			
4. 44	51. 10	3. 1	·1116	10. 47	·03153			
	(†)	3. 37	·1119	14. 13	·03318			
8. 42	48. 20	3. 55	·1115	14. 38	·03310			
9. 32	48. 0	4. 10	·1115	15. 22	·03277			
10. 9	44. 55	4. 19	·1120	15. 57	·03363			
10. 33	49. 20	4. 48	·1111	18. 21	·03548			
11. 0	46. 45	4. 58	·1116	18. 40	·03543			
11. 12	47. 0	5. 4	·1115		·03470			
11. 27	46. 0	5. 15	·1118	20. 37	·03536			
11. 43	46. 40	5. 30	·1116		·03470			
11. 58	46. 15	5. 49	·1120	22. 0	·03466			
12. 6	47. 30	5. 56	·1126		·03403			
12. 18	45. 15	6. 20	·1116	22. 58	·03386			
12. 53	44. 40	6. 44	·1115	23. 59	·03307			
13. 5	46. 20	7. 7	·1122					
13. 15	44. 25	7. 29	·1117					
13. 49	47. 10	8. 17	·1113					
14. 26	53. 0		(†)					
14. 45	48. 0	9. 0	·1114*					
14. 52	48. 10	21. 0	·1092*					
15. 15	35. 55	22. 40	·1102					
15. 30	35. 40	23. 7	·1108					
16. 12	45. 55	23. 15	·1113					
16. 38	47. 0	23. 24	·1111					
18. 15	46. 0	23. 34	·1113					
19. 31	46. 5	23. 59	·1108					
19. 38	44. 45							
20. 2	46. 0							
20. 18	45. 0							
20. 56	47. 10							
	(†)							
21. 0	46. 10*							
Aug. 19.		Aug. 19.		Aug. 19.		Aug. 19.		
	(†)	0. 0	·1108	0. 0	·03307	1. 0	64·9	64·4
0. 30	20. 54. 45	0. 23	·1112	2. 0	·03116	3. 0	68·3	68·0
0. 48	54. 50	1. 22	·1126	3. 49	·03414	9. 0	69·0	69·5
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 19 h m	° ′ ″	Aug. 19 h m		Aug. 19 h m		Aug. 19 h m	°	°
1. 0	20. 56. 0	2. 15	·1114	5. 49	·03988	21. 0	60·4	60·8
1. 15	55. 45	2. 22	·1115	7. 30	·04342	22. 0	61·6	61·2
1. 23	56. 25		***		(†)	23. 0	62·4	62·0
2. 18	54. 0	3. 0	·1116	9. 0	·04583*			
2. 27	54. 30		***	21. 0	·05414*			
2. 57	53. 0	3. 39	·1120					
3. 13	53. 0		***					
	***	3. 58	·1111					
5. 27	49. 0	4. 3	·1116					
	***	4. 6	·1114					
6. 56	51. 10	4. 15	·1122					
10. 3	51. 55	4. 19	·1100					
10. 15	51. 10	4. 28	·1114					
10. 55	45. 35	4. 33	·1106					
11. 19	46. 0	4. 39	·1111					
11. 59:	37. 55	5. 0	·1115					
12. 40	43. 30	5. 6	·1112					
12. 58	40. 40	5. 12	·1117					
14. 13	47. 10	5. 19	·1109					
14. 16	46. 30	5. 27	·1113					
14. 43	56. 0	5. 50	·1111					
14. 48	54. 30	5. 58	·1122					
14. 53	56. 10	6. 20	·1116					
15. 2	54. 30	6. 45	·1117					
15. 10	57. 0	6. 57	·1113					
15. 17	51. 30	7. 15	·1117					
15. 27	58. 30	7. 24	·1117					
15. 32	57. 10	7. 42	·1121					
15. 36	59. 0	7. 55	·1118					
15. 53	52. 20	8. 28	·1116					
16. 0	51. 55	9. 2	·1125					
16. 7	57. 15	9. 19	·1120					
16. 23	42. 5	9. 47	·1127					
16. 30	42. 30	10. 11	·1125					
16. 37	41. 20	10. 25	·1118					
16. 45	47. 5	10. 36	·1114					
17. 0	40. 5	10. 47	·1117					
17. 24	45. 20	10. 53	·1113					
17. 39	43. 30	11. 11	·1124					
17. 52	48. 0	11. 22	·1122					
18. 11	46. 30	11. 56	·1083					
18. 24	49. 30	12. 2	·1087					
18. 33	49. 0	12. 7	·1084					
18. 45	51. 20	12. 11	·1087					
18. 57	47. 15	12. 17	·1086					
19. 6	50. 0	12. 23	·1097					
19. 12	47. 55	12. 36	·1080					
19. 45	45. 55	12. 41	·1089					
19. 53	47. 30	12. 47	·1084					
20. 0	45. 25	12. 49	·1088					
20. 38	46. 0	12. 53	·1085					
21. 5	48. 20	13. 3	·1109					
21. 29	47. 45	13. 15	·1086					
21. 33	49. 55	13. 27	·1104					
22. 18	54. 0	13. 34	·1102					
22. 45	54. 30	13. 42	·1120					
22. 57	56. 0	13. 47	·1111					
23. 19	56. 20	13. 50	·1113					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 19 h m	° ′ ″	Aug. 19 h m		h m		h m	°	°
23. 44	20. 58. 5	14. 5	·1107					
	(†)	14. 12	·1117					
		14. 22	·1107					
		14. 33	·1126					
		15. 3	·1093					
		15. 6	·1102					
		15. 8	·1095					
		15. 15	·1102					
		15. 23	·1099					
		15. 37	·1113					
		15. 48	·1113					
		15. 55	·1092					
		16. 7	·1102					
		16. 22	·1097					
		16. 27	·1091					
		16. 34	·1094					
		16. 47	·1082					
		16. 55	·1085					
		17. 15	·1078					
		17. 24	·1070					
		17. 34	·1086					
		17. 57	·1090					
		18. 7	·1096					
		18. 19	·1092					
		18. 28	·1098					
		18. 41	·1090					
		18. 51	·1098					
		19. 0	·1093					
		19. 14	·1096					
		19. 19	·1094					
		19. 34	·1098					
		19. 38	·1094					
		19. 47	·1098					
		19. 54	·1095					
		20. 2	·1098					
		20. 24	·1096					
		20. 32	·1090					
		20. 46	·1092					
		21. 13	·1085					
		21. 28	·1072					
		21. 42	·1071					
		21. 48	·1076					
		22. 8	·1074					
		22. 39	·1098					
		22. 46	·1100					
		22. 53	·1095					
		23. 19	·1119					
			(†)					
Aug. 20	(†)	Aug. 20	(†)	Aug. 20	(†)	Aug. 20		
1. 0	20. 55. 14*	1. 0	·1082*	1. 0	·04180*	0. 0	63·5	63·3
3. 0	53. 20*	1. 22	·1096	2. 47	·02955	1. 0	64·7	64·8
5. 57	50. 0		***	3. 33	·03067	2. 0	66·0	66·0
6. 15	49. 45	2. 30	·1109	4. 56	·03376	3. 0	67·0	67·1
10. 3	52. 20		***	6. 53	·03520	6. 0	69·0	68·8
10. 41	51. 25	3. 17	·1111	8. 31	·03587	9. 0	68·7	68·5
						12. 0	67·5	67·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 19. The Photographic Trace for the Vertical Force Magnet was off the sheet from $7^h.\ 30^m.$, in the direction of increasing force.

VERTICAL FORCE.—August 20. The adjustments were altered at $0^h.$, so that the readings were diminished by $7^{div}\cdot80$, or by 0·01234 parts of the whole Vertical Force; and again at $2^h.$, when the readings were still further diminished by $9^{div}\cdot50$, or by 0·01503 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.20		Aug.20		Aug.20		Aug.20		
h m	° ′ ″	h m		h m		h m	°	°
13. 48	20. 51. 0	3. 30	·1150	9. 48	·03604	21. 0	64·5	64·8
19. 54	47. 40	3. 37	·1149		·03734	22. 0	65·2	65·0
21. 19	48.. 0	3. 49	·1141	11. 10	·03703	23. 0	63·9	65·6
23. 28	53. 45	4. 7	·1138	12. 32	·03727			
23. 59	54. 0	4. 15	·1143		·04006			
		4. 30	·1141	15. 29	·04117			
		4. 43	·1107	17. 32	·04247			
		5. 42	·1111	19. 25	·04238			
		5. 49	·1115	22. 23	·04173			
		6. 18	·1111	22. 38	·04182			
		7. 37	·1115	23. 59	·04146			
		7. 38	·1112					
		8. 46	·1117					
		9. 0	·1114					
		10. 18	·1114					
		10. 36	·1112					
		12. 58	·1109					
		13. 0	·1107					
		14. 54	·1109					
		17. 26	·1108					
		18. 51	·1106					
		20. 9	·1101					
		20. 41	·1098					
		21. 20	·1097					
		21. 45	·1096					
		22. 20	·1100					
		23. 3	·1102					
		23. 32	·1104					
		23. 45	·1107					
			(†)					
Aug.21		Aug.21		Aug.21		Aug.21		
0. 0	20. 54. 0		(†)	1. 0	·04093*	0. 0	66·5	66·2
1. 17	54. 30	0. 45	·1112	3. 0	·03895*	1. 0	67·2	67·0
4. 49	49. 0	1. 0	·1110	9. 0	·03665*	2. 0	68·1	68·0
9. 0	51. 20	1. 23	·1106	21. 0	·04188*	3. 0	69·0	68·8
16. 13	49. 30	1. 30	·1112			9. 0	69·6	69·1
17. 29	48. 0	2. 17	·1105			21. 0	63·4	64·0
17. 55	48. 45	2. 31	·1108					
18. 16	47. 50	2. 53	·1107					
18. 41	48. 30	4. 4	·1112					
19. 50	47. 10	4. 11	·1111					
22. 14	51. 30	5. 19	·1116					
23. 0	53. 25	5. 47	·1115					
23. 59	53. 0	6. 7	·1116					
		7. 22	·1116					
		7. 40	·1117					
		8. 8	·1116					
		8. 52	·1116					
		9. 2	·1113					
		10. 6	·1117					
		10. 51	·1117					
		11. 33	·1115					
		11. 42	·1116					
		12. 18	·1114					
		12. 33	·1115					
		12. 55	·1114					
		15. 47	·1114					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F Magnet.
h m	° ′ ″	Aug.21		h m		h m	°	°
		h m						
		15. 55	·1112					
		17. 10	·1110					
		17. 38	·1111					
		17. 56	·1111					
		18. 13	·1112					
		19. 13	·1108					
		20. 55	·1105					
		22. 10	·1108					
		22. 53	·1107					
		23. 40	·1113					
			(†)					
Aug.22		Aug.22		Aug.22		Aug.22		
0. 0	20. 53. 0		(†)		(†)	1. 0	63·5	64·0
0. 36	53. 0	1. 0	·1110*	1. 0	·04108*	3. 0	64·8	65·5
2. 0	50. 0	1. 40	·1126	1. 49	·03764	9. 0	66·0	66·3
2. 6	50. 25		***	2. 28	·03723	21. 0	57·6	58·0
2. 14	50. 0	1. 57	·1125	3. 48	·03575			
2. 21	51. 15		***	3. 54	·03588			
2. 57	49. 0	2. 35	·1131	6. 18	·03712			
3. 57	49. 5		***		·03783			
4. 26	48. 10	3. 9	·1121	6. 59	·03715			
4. 41	48. 35		***		(†)			
4. 55	47. 50	3. 33	·1125	9. 0	·03839*			
6. 42	49. 0	3. 45	·1123	16. 37	·03968			
6. 54	49. 40	4. 3	·1125	17. 50	·03890			
7. 27	49. 35		***	18. 58	·03738			
8. 3	52. 0	4. 31	·1116	21. 53	·03376			
8. 15	51. 35	4. 46	·1119	23. 59	·03165			
8. 39	52. 10	4. 54	·1116					
8. 51	51. 10	5. 15	·1116					
9. 2	52. 30		***					
9. 25	48. 15	6. 4	·1124					
9. 53	46. 50	6. 15	·1122					
10. 21	50. 35	6. 37	·1125					
10. 32	50. 15		***					
11. 0	51. 10	7. 12	·1120					
11. 19	50. 15		***					
14. 5	50. 0	7. 44	·1113					
14. 24	52. 20		***					
	***	8. 16	·1110					
16. 58	48. 45	8. 33	·1112					
	***		***					
19. 3	47. 45	8. 51	·1108					
19. 22	46. 45	9. 17	·1112					
20. 0	49. 10	9. 36	·1129					
20. 41	20. 49. 30	9. 52	·1120					
23. 30	21. 0. 10	10. 7	·1119					
23. 59	1. 0	10. 28	·1111					
		11. 10	·1110					
		11. 22	·1112					
		11. 36	·1109					
		12. 14	·1113					
		12. 32	·1111					
		13. 0	·1114					
		13. 16	·1112					
		14. 26	·1113					
		14. 39	·1114					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the readings will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

August 21. The Photographic Trace for the Vertical Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug. 22 h m		h m		h m	°	°
		17. 31	·1114					
		17. 47	·1113					
		17. 56	·1115					
		18. 7	·1108					
		18. 33	·1112					
		18. 46	·1108					
		19. 20	·1107					
		19. 32	·1109					
		21. 2	·1099					
		21. 46	·1097					
		22. 5	·1104					
		22. 27	·1107					
		22. 31	·1111					
		22. 51	·1116					
			(†)					
Aug. 23		Aug. 23		Aug. 23		Aug. 23		
0. 0	21. 1. 0		(†)	0. 0	·03165	1. 0	62 ·8	62 ·2
0. 37	2. 0	0. 49	·1118	1. 2	·03114	3. 0	65 ·1	65 ·7
1. 22	21. 1. 25	0. 57	·1115	1. 29	·03057	9. 0	65 ·8	67 ·2
3. 21	20. 54. 35	1. 7	·1117		(†)	21. 6	58 ·1	58 ·4
3. 38	56. 0	1. 32	·1113	2. 18	·02676			
4. 20	53. 30	1. 40	·1116	3. 20	·02724			
4. 36	53. 45	1. 59	·1116		(†)			
4. 44	52. 55	2. 6	·1118	3. 56	·02902			
5. 0	52. 50	2. 43	·1118	5. 33	·03300			
5. 24	51. 0	2. 58	·1120	7. 19	·03538			
5. 41	52. 0	3. 19	·1114	7. 23	·03555			
5. 59	52. 0		(†)	7. 48	·03538			
6. 5	51. 55	3. 44	·1124	8. 27	·03576			
6. 23	53. 20	3. 59	·1123		·03668			
6. 33	52. 35	4. 21	·1114	10. 16	·03607			
6. 48	53. 10	4. 38	·1126	11. 28	·03602			
7. 46	52. 15	4. 48	·1122	12. 32	·03630			
8. 23	54. 50	5. 0	·1121	12. 41	·03620			
	***	5. 22	·1112	12. 53	·03631			
8. 54	54. 45	5. 36	·1113	13. 15	·03598			
9. 0	52. 55	5. 51	·1096	13. 29	·03625			
9. 12	56. 0	6. 21	·1108	14. 12	·03670			
9. 41	53. 40	6. 34	·1105	14. 46	·03722			
10. 48	56. 10	6. 40	·1107	15. 15	·03728			
11. 30	55. 40	6. 51	·1105	16. 20	·03834			
12. 16	53. 10	7. 19	·1110		(†)			
12. 33	54. 20	7. 34	·1105	21. 6	·03839*			
12. 46	51. 45	7. 52	·1103	22. 51	·03676			
14. 30	53. 50	8. 6	·1108	23. 31	·03675			
14. 45	54. 5	8. 55	·1093		·03567			
15. 19	47. 10	9. 3	·1096	23. 59	·03535			
15. 28	47. 55	9. 30	·1094					
15. 33	46. 55	10. 7	·1098					
16. 5	50. 0	10. 17	·1095					
16. 14	50. 0	10. 41	·1103					
16. 45	53. 5	10. 50	·1101					
17. 19	50. 35	10. 55	·1105					
17. 36	48. 20	11. 19	·1104					
18. 8	47. 25	11. 34	·1108					
18. 33	49. 10	11. 50	·1106					
18. 41	48. 15	12. 9	·1112					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 23 h m	° ′ ″	Aug. 23 h m		h m		h m	°	°
18. 45	20. 49. 0	12. 21	·1112					
18. 50	48. 10	12. 32	·1118					
18. 56	49. 30	12. 39	·1114					
19. 7	48. 25	12. 52	·1130					
19. 42	48. 15	13. 0	·1126					
19. 51	46. 0	13. 20	·1104					
20. 18	51. 20	13. 26	·1113					
20. 25	50. 0		***					
20. 50	54. 5	13. 58	·1106					
21. 21	54. 40	14. 3	·1108					
22. 30	20. 58. 20	14. 32	·1095					
23. 3	21. 0. 30	14. 55	·1115					
23. 59	2. 55	15. 9	·1119					
		15. 22	·1113					
		15. 28	·1116					
		15. 33	·1110					
		15. 54	·1104					
		16. 12	·1104					
		16. 46	·1100					
		17. 7	·1105					
		17. 11	·1102					
		17. 17	·1105					
		17. 29	·1103					
		17. 45	·1107					
		18. 6	·1101					
		18. 19	·1106					
		19. 4	·1101					
		19. 33	·1100					
		19. 48	·1095					
		20. 1	·1101					
		20. 15	·1098					
		20. 45	·1084					
		21. 18	·1080					
		21. 30	·1084					
		21. 36	·1081					
		21. 59	·1099					
		22. 18	·1104					
		22. 23	·1102					
		22. 36	·1106					
		23. 14	·1119					
		23. 47	·1113					
		23. 59	·1100					
Aug. 24		Aug. 24		Aug. 24		Aug. 24		
0. 0	21. 2. 55	0. 0	·1099	0. 0	·03535	9. 0	66 ·0	66 ·0
0. 15	2. 55	0. 5	·1098	0. 41	·03480	21. 0	58 ·4	58 ·3
0. 40	21. 5. 10	0. 22	·1104	2. 32	·03222			
2. 26	20. 58. 40	0. 28	·1100	3. 22	·03094			
2. 37	21. 0. 0	0. 35	·1103	5. 2	·03443			
2. 57	20. 57. 50	1. 0	·1084		·03542			
3. 22	56. 0	1. 50	·1106	5. 33	·03468			
3. 43	57. 50	2. 13	·1109		·03524			
4. 6	55. 0	2. 39	·1120	6. 19	·03433			
4. 33	56. 30	3. 0	·1107		·03494			
4. 57	54. 50	3. 18	·1102	7. 8	·03402			
5. 16	52. 0	3. 40	·1122		·03470			
5. 38	51. 55	4. 9	·1105	8. 9	·03396			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.24		Aug.24		Aug.24				
h m	° ′ ″	h m		h m		h m	°	°
5. 50	20. 50. 10	4. 23	·1115	8. 48	{·03420			
6. 0	52. 20	4. 37	·1102		{·03523			
6. 30	54. 0	4. 52	·1094	11. 56:	·03577			
6. 50	50. 10	5. 11	·1101	14. 44	·03788			
7. 30	52. 10	5. 30	·1094	16. 34	·03990			
7. 38	51. 0	5. 58	·1117	19. 5	·03618			
8. 0	51. 50	6. 9	·1108	20. 51	·03330			
8. 22	57. 10	6. 15	·1107	21. 56	·03236			
12. 21	54. 40	6. 31	·1100	23. 59	·03137			
	(†)	6. 47	·1116					
14. 40	52. 10	6. 59	·1118					
15. 7	54. 0	7. 20	·1107					
16. 49	47. 0	7. 30	·1113					
17. 29	48. 0	8. 28	·1105					
17. 38	47. 10	9. 44	·1108					
17. 56	47. 0	10. 59	·1106					
18. 3	46. 0	12. 20	·1106					
18. 22	47. 10		(†)					
18. 40	46. 30	14. 44	·1107					
19. 15	48. 30	15. 4	·1102					
19. 42	47. 25	15. 55	·1112					
20. 3	50. 45	17. 39	·1103					
20. 44	20. 50. 55	17. 52	·1106					
23. 15	21. 2. 50	18. 9	·1100					
23. 59	2. 55	18. 20	·1101					
		18. 32	·1096					
		18. 51	·1092					
		19. 8	·1086					
			***					
		19. 46	·1085					
			***					
		19. 56	·1088					
			***					
		20. 31	·1079					
		21. 18	·1095					
		21. 53	·1091					
		22. 24	·1096					
		22. 52	·1095					
		22. 59	·1100					
		23. 26	·1091					
		23. 59	·1098					
Aug.25		Aug.25		Aug.25		Aug.25		
0. 0	21. 2. 55	0. 0	·1098	0. 0	·03137	1. 0	64·5	63·8
0. 53	0. 55	1. 6	·1107	1. 30	·02972	3. 0	67·1	66·9
1. 35	21. 1. 20	1. 35	·1109	2. 24	·02803	9. 0	65·9	65·9
	***		***	3. 13	·02635	21. 0	59·9	59·7
2. 38	20. 58. 20	1. 58	·1104	5. 32:	·03220			
2. 40	59. 20		***	8. 25	·03458			
3. 6	56. 50	2. 30	·1102	9. 53	·03470			
3. 41	56. 10	2. 42	·1107	12. 27	·03588			
4. 0	56. 50		***	13. 36	·03694			
4. 32	56. 0	3. 27:	·1099	17. 7	·04077			
5. 35	56. 15		***	17. 58	·03942			
5. 55	55. 35	4. 3	·1111	20. 43	·03680			
6. 28	55. 50		***	21. 54	·03537			
7. 19	56. 55	4. 34	·1095	22. 48	·03490			
7. 57	55. 55		***	23. 59	·03385			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.25		Aug.25						
h m	° ′ ″	h m		h m		h m	°	°
8. 52	20. 48. 0	4. 40	·1101					
9. 18	53. 5		***					
9. 45	52. 10	4. 57	·1087					
10. 3	53. 10	5. 4	·1092					
10. 23	52. 45	5. 13	·1086					
10. 56	53. 20	5. 21	·1092					
11. 23	52. 50	5. 30	·1086					
11. 49	56. 45	5. 36	·1091					
14. 16	51. 25	5. 57	·1087					
15. 3	51. 30		***					
	***	7. 5	·1105					
15. 53	49. 45	7. 15	·1100					
16. 35	52. 40	7. 22	·1105					
16. 44	52. 15		***					
17. 25	56. 45	8. 0	·1103					
17. 45	56. 10	8. 22	·1110					
18. 22	50. 45	8. 38	·1103					
19. 8	49. 0	8. 49	·1107					
19. 35	47. 20	9. 20	·1094					
19. 41	49. 10	9. 31	·1097					
19. 52	48. 10	9. 50	·1092					
21. 0	20. 49. 10	10. 34	·1091					
23. 59	21. 1. 0	10. 48	·1094					
		11. 19	·1092					
		11. 40	·1102					
		11. 52	·1100					
		12. 9	·1105					
		12. 30	·1102					
		12. 42	·1102					
		12. 55	·1098					
		13. 14	·1096					
		13. 22	·1097					
		13. 44	·1096					
		14. 47	·1098					
		15. 13	·1107					
		15. 27	·1103					
		15. 51	·1098					
		16. 9	·1097					
		16. 22	·1101					
		17. 13	·1090					
		17. 50	·1106					
		18. 47	·1097					
		19. 5	·1098					
			***					
		19. 43	·1097					
		19. 55	·1097					
		20. 49	·1088					
		21. 10	·1083					
		21. 31	·1083					
			***					
		22. 0	·1090					
			***					
		22. 25	·1103					
			***					
		23. 28	·1100					
			***					
		23. 59	·1110					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

August 24. The motion of the Declination and Horizontal Force photographic cylinder was impeded for two hours, namely, from $12^h.\ 30^m.$ to $14^h.\ 30^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 26	° ′ ″	Aug. 26		Aug. 26		Aug. 26	°	°
h m		h m		h m		h m		
0. 0	21. 0. 55	0. 0	·1110	0. 0	·03385	1. 0	66·2	65·6
0. 20	2. 55	0. 17	·1106	2. 15	·03104	3. 0	69·1	68·8
0. 52	4. 0	0. 42	·1111	3. 9	·02863	9. 0	69·1	69·0
1. 7	2. 0		(†)	4. 30	·03292	21. 0	62·5	63·0
1. 38	2. 5	1. 0	·1108*	5. 34	·03540	22. 0	63·5	63·7
1. 49	1. 0	1. 31	·1108		·03612	23. 0	64·2	64·1
2. 0	1. 0	2. 2	·1118	6. 7	·03580			
2. 10	1. 35	2. 13	·1113		·03563			
2. 20	0. 50	3. 16	·1098	6. 41	·03608			
2. 40	21. 0. 55		(†)		·03680			
	***	9. 0	·1117*	7. 13	·03640			
3. 52	20. 58. 45	9. 10	·1097	7. 56	·03618			
	***	9. 38	·1088		·03727			
5. 8	53. 25	9. 58	·1091	9. 44	·03673			
5. 42	54. 0	10. 34	·1092	12. 5	·03740			
6. 36	53. 0	10. 52	·1096	12. 43	·03778			
7. 8	53. 40	11. 6	·1094	17. 33	·04205			
7. 55	51. 40	11. 22	·1096	22. 7	·03762			
8. 12	52. 0	11. 47	·1093	23. 59	·03507			
8. 42	45. 55	12. 15	·1100					
8. 51	40. 50	12. 45	·1095					
9. 15	48. 20	13. 15	·1100					
9. 26	46. 35	13. 57	·1095					
9. 52	49. 10	14. 17	·1098					
10. 3	49. 0	14. 43	·1096					
10. 52	52. 10	15. 4	·1099					
11. 45	52. 10	16. 1	·1098					
12. 2	51. 10	16. 19	·1100					
12. 34	57. 0	16. 43	·1096					
12. 56	52. 0	17. 3	·1098					
13. 30	52. 0	17. 48	·1096					
14. 15	51. 35	18. 21	·1097					
14. 32	50. 55	19. 29	·1092					
14. 54	51. 35	19. 44	·1091					
15. 24	51. 0	20. 55	·1083					
15. 52	52. 10	21. 18	·1084					
16. 44	50. 50	21. 52	·1081					
16. 58	51. 15	22. 12	·1083					
18. 12	49. 10		(†)					
18. 40	49. 0							
18. 55	48. 15							
19. 35	47. 10							
19. 59	47. 40							
20. 7	49. 0							
20. 20	48. 20							
22. 11	53. 25							
22. 24	55. 0							
23. 59	58. 40							
Aug. 27		Aug. 27		Aug. 27		Aug. 27		
0. 0	20. 58. 40		(†)	0. 0	·03507	0. 0	65·5	65·3
	(†)	0. 4	·1098	1. 3	·03458	1. 0	67·0	66·9
1. 0	21. 0. 14*	0. 40	·1108		·02856	2. 0	68·2	68·1
2. 52	20. 54. 45	1. 2	·1105	2. 49	·02587	3. 0	69·2	69·1
4. 3	53. 0	1. 17	·1104		·02978	6. 0	70·5	70·1
4. 20	53. 35	1. 24	·1109	4. 28	·02888	9. 0	68·8	68·2
4. 38	53. 35	1. 53	·1108	5. 41	·03182	12. 0	67·0	67·0
	(†)	2. 18	·1114		·03270	18. 0	59·4	61·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 27	° ′ ″	Aug. 27		Aug. 27		Aug. 27	°	°
h m		h m		h m		h m		
7. 38	20. 53. 45	2. 40	·1110	6. 18	·03233	21. 0	59·5	60·1
7. 44	54. 30	2. 51	·1112		·03310	22. 0	59·8	60·2
7. 59	53. 45	3. 19	·1106	7. 15	·03252	23. 0	60·1	60·7
9. 0	54. 35		***		·03328			
	***	3. 52	·1104	8. 33	·03297			
11. 59	51. 10	4. 1	·1104	10. 51	·03403			
12. 15	52. 40	4. 9	·1102		(†)			
12. 30	52. 25		***	16. 15	·03795			
12. 45	53. 10	4. 44	·1102	19. 7	·03468			
13. 15	51. 20	5. 29	·1108	20. 50	·03250			
14. 50	49. 35	5. 45	·1106	21. 22	·03192			
15. 44	49. 25	6. 2	·1108		(†)			
16. 7	48. 50	6. 29	·1104					
16. 19	49. 10	6. 50	·1102					
17. 15	48. 0	7. 21	·1104					
17. 27	49. 10	7. 53	·1102					
17. 39	47. 30	8. 7	·1105					
17. 54	47. 15	8. 54	·1107					
18. 0	48. 20	9. 38	·1105					
18. 11	46. 25	10. 17	·1107					
18. 37	48. 0	11. 37	·1110					
18. 45	47. 30	11. 45	·1108					
19. 2	48. 10	12. 0	·1114					
19. 22	46. 50	12. 10	·1113					
19. 27	48. 25	12. 23	·1117					
19. 39	47. 0	13. 0	·1112					
20. 48	51. 20		(†)					
21. 1	51. 0	15. 33	·1111					
22. 17	57. 20	15. 48	·1112					
22. 22	59. 0	16. 0	·1108					
23. 8	57. 10	16. 35	·1111					
23. 36	57. 20	17. 30	·1108					
23. 59	58. 20	17. 37	·1109					
		17. 45	·1106					
		18. 13	·1108					
		18. 45	·1104					
		19. 5	·1105					
		19. 54	·1091					
		20. 15	·1091					
		20. 31	·1089					
		20. 49	·1081					
		21. 25	·1077					
		21. 32	·1078					
		21. 51	·1077					
			(†)					
		22. 43	·1069					
		23. 6	·1076					
		23. 17	·1077					
		23. 36	·1087					
		23. 59	·1099					
Aug. 28		Aug. 28		Aug. 28		Aug. 28		
0. 0	20. 58. 20	0. 0	·1099		(†)	0. 0	61·0	61·1
0. 23	20. 58. 40	0. 14	·1108	0. 13	·02082	1. 0	62·5	62·7
0. 57	21. 0. 0		***	1. 16	·02030	2. 0	63·9	64·3
1. 52	0. 10	0. 40	·1115	2. 6	·01942	3. 0	65·4	65·8
2. 17	21. 0. 50		***		·02000	9. 0	67·6	67·9
2. 30	20. 58. 55	1. 12	·1115	2. 50	·01866	21. 0	60·0	60·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 28		Aug. 28		Aug. 28				
h m	° ′ ″	h m		h m		h m	°	°
2. 32	21. 0. 10	1. 20	·1112	3. 14	·01878			
2. 39	20. 58. 0	1. 38	·1116	4. 9	·02096			
2. 52	59. 10	1. 42	·1118	6. 27:	·02687			
2. 58	58. 50	1. 45	·1114	8. 42	·02940			
3. 4	59. 15	1. 49	·1120	9. 1	·02975			
3. 39	57. 20	1. 54	·1115	9. 12	·02952			
4. 12	20. 58. 40	1. 58	·1121	10. 32	·02940			
4. 27	21. 2. 0	2. 14	·1124	11. 53	·02986			
4. 56	20. 55. 0	2. 23	·1113	12. 7	·03012			
5. 7	54. 30	2. 28	·1118	12. 34	·03004			
5. 30	57. 10	2. 37	·1097	13. 54	·03115			
5. 48	56. 0	2. 50	·1114	14. 34	·03113			
6. 6	57. 20	2. 57	·1114	16. 16	·03270			
6. 15	57. 0	3. 4	·1126	17. 26	·03453			
6. 30	57. 10	3. 25	·1110	17. 50	·03477			
6. 42	55. 25	3. 37	·1106	18. 40	·03572			
6. 55	56. 45	3. 58	·1131	20. 7	·03390			
7. 10	54. 50	4. 9	·1121	21. 36	·03276			
7. 14	55. 0	4. 21	·1136	21. 54	·03274			
7. 23	54. 5	4. 45	·1086		(†)			
7. 30	54. 40	4. 57	·1096	23. 12	·03115			
8. 29	50. 0	5. 7	·1095	23. 59	·03112			
9. 2	34. 0	5. 25	·1111					
9. 18	49. 55	5. 49	·1097					
9. 35:	46. 25	6. 2	·1103					
9. 49	48. 10	6. 14	·1097					
10. 2	46. 10	6. 25	·1108					
10. 26	48. 0	6. 35	·1100					
10. 39	46. 0	6. 47	·1111					
10. 54	48. 5	6. 54	·1108					
11. 2	47. 55	7. 14	·1115					
11. 20	49. 15	7. 35	·1106					
12. 5	46. 5	7. 48	·1107					
12. 13	52. 15	8. 4	·1100					
12. 56	50. 25	8. 11	·1099					
13. 3	50. 50	8. 37	·1076					
13. 22	49. 0	8. 46	·1080					
13. 45	20. 50. 0	9. 4	·1121					
14. 10	21. 3. 0	9. 17	·1090					
14. 27	20. 59. 50	9. 33	·1099					
15. 0	58. 30	9. 45	·1092					
15. 22	54. 40	9. 49	·1094					
15. 29	54. 15	10. 0	·1091					
15. 38	55. 15	10. 25	·1095					
16. 8	49. 35	10. 46	·1089					
16. 16	49. 20	11. 7	·1096					
16. 32	44. 30	11. 22	·1093					
16. 49	48. 20	11. 30	·1095					
17. 25	49. 15	11. 52	·1091					
17. 42	52. 55	12. 28	·1112					
17. 49	52. 45	12. 35	·1107					
17. 55	53. 35	13. 7	·1101					
18. 3	52. 30	13. 15	·1102					
18. 28	54. 40	13. 20	·1095					
18. 47	53. 40	13. 31	·1100					
19. 0	54. 25	13. 41	·1097					
19. 19	52. 10	13. 59	·1096					
19. 26	54. 50	14. 23	·1112					

Greenwich Mean Solar Time.	Western Declination	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 28		Aug. 28						
h m	° ′ ″	h m		h m		h m	°	°
19. 38	20. 53. 50	14. 49	·1100					
19. 53	56. 30	15. 14	·1108					
20. 16	54. 25	15. 22	·1113					
20. 29	57. 40	15. 35	·1114					
20. 35	57. 0	15. 54	·1122					
20. 48	59. 0	16. 14	·1127					
21. 0	58. 0	16. 33	·1114					
21. 18	58. 5	16. 55	·1104					
21. 36	57. 10	17. 31	·1099					
21. 50	58. 40	17. 37	·1102					
22. 30	57. 0	18. 0	·1093					
23. 4	58. 0	18. 6	·1094					
23. 22	57. 0	18. 24	·1090					
23. 52	57. 0	18. 45	·1095					
23. 59	56. 50	18. 52	·1093					
		19. 0	·1096					
		19. 14	·1084					
		19. 22	·1089					
		19. 36	·1075					
		19. 47	·1071					
		19. 59	·1070					
		20. 14	·1065					
		20. 30	·1075					
		20. 40	·1072					
		20. 49	·1076					
		21. 0	·1070					
		21. 18	·1072					
		21. 27	·1076					
		22. 2	·1083					
		22. 13	·1078					
		22. 21	·1080					
		22. 29	·1075					
		22. 40	·1074					
		22. 52	·1079					
		23. 13	·1080					
			(†)					
Aug. 29		Aug. 29		Aug. 29		Aug. 29		
0. 0	20. 56. 55		(†)	0. 0	·03112	1. 0	63 ·0	63 ·1
0. 16	20. 57. 25	1. 0	·1104*	0. 8	·03100	3. 0	65 ·1	65 ·0
0. 30	21. 0. 50	1. 17	·1108	2. 55	·02938	9. 0	65 ·0	65 ·5
1. 25	0. 0	1. 52	·1102	4. 26	·02777	21. 0	59 ·1	59 ·6
1. 38	21. 1. 0	2. 10	·1118	5. 54	·02686			
1. 59	20. 59. 45	2. 17	·1113	6. 41	·02658			
2. 5	21. 0. 0	2. 20	·1115	6. 52	·02635			
2. 15	20. 59. 30	2. 30	·1101	7. 15	·02638			
2. 25	57. 55	2. 41	·1107	7. 25	·02614			
2. 39	59. 25	2. 50	·1097	7. 49	·02610			
3. 0	54. 55	3. 1	·1101	8. 11	·02578			
3. 9	55. 20	3. 8	·1096	9. 42	·02562			
3. 30	53. 30	3. 12	·1104	11. 22	·02636			
3. 42	53. 40	3. 27	·1109	13. 36	·02683			
3. 44	54. 10	3. 32	·1103	13. 51	·02680			
3. 57	53. 50	3. 45	·1113	14. 4	·02703			
4. 7	55. 55	4. 0	·1106	14. 32	·02713			
4. 30	57. 30	4. 8	·1124	14. 56	·02740			
5. 9	55. 0	4. 15	·1118	15. 38	·02832			
5. 17	55. 0	4. 31	·1119	18. 17	·03020			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug.29		Aug.29		Aug.29				
h m	° ′ ″	h m		h m		h m	°	°
6. 7	20. 51. 0	4. 41	·1106	20. 32	·03142			
6. 15	51. 40	5. 22	·1115	20. 44	·03114			
6. 28	51. 15	5. 36	·1111	21. 2	·03100			
6. 47	52. 25	5. 49	·1115		·02957			
6. 58	49. 15	6. 8	·1114	23. 42	·02884			
7. 16	52. 20	6. 22	·1125		(†)			
7. 39	41. 0	6. 38	·1119					
7. 56	48. 35	6. 48	·1122					
8. 16	49. 40	6. 57	·1118					
8. 40	49. 0	7. 2	·1102					
8. 57	50. 35	7. 24	·1117					
9. 38	47. 50	7. 34	·1104					
10. 2	47. 20	7. 55	·1134					
10. 47	51. 5	8. 16	·1114					
11. 4	50. 0	8. 33	·1108					
11. 25	52. 0	8. 38	·1111					
11. 40	50. 30	8. 49	·1108					
11. 51	50. 10	9. 30	·1107					
12. 25	52. 15	9. 44	·1105					
12. 35	51. 10		***					
12. 45	51. 50	10. 15	·1106					
13. 27	49. 55	10. 49	·1113					
13. 47	53. 25	10. 59	·1107					
14. 0	53. 10	11. 19	·1114					
14. 17	55. 55	11. 39	·1106					
14. 55	52. 5	12. 2	·1116					
15. 5	47. 55	12. 10	·1116					
15. 15	49. 5	12. 25	·1121					
15. 59	48. 55	12. 54	·1123					
16. 20	50. 35	13. 7	·1127					
17. 0	50. 0	13. 30	·1119					
17. 27	51. 0	13. 35	·1120					
17. 48	50. 50	13. 49	·1110					
17. 56	49. 20	14. 0	·1119					
18. 8	49. 50		***					
18. 50	48. 10	14. 32	·1112					
18. 54	48. 50	14. 42	·1115					
18. 59	48. 0	14. 46	·1113					
	***	14. 56	·1120					
19. 38	48. 30	15. 20	·1115					
19. 45	47. 0	15. 46	·1118					
19. 58	49. 0	15. 56	·1116					
20. 8	48. 5	16. 30	·1122					
20. 19	48. 35		***					
20. 29	47. 25	17. 9	·1112					
20. 52	48. 25	17. 25	·1112					
21. 50	53. 0	17. 33	·1116					
23. 15	55. 35	17. 39	·1110					
23. 22	55. 0	17. 45	·1112					
23. 52	59. 30		***					
23. 59	59. 10	18. 30	·1107					
			***					
		19. 16	·1105					
		19. 35	·1102					
		19. 45	·1103					
			***					
		20. 30	·1092					
		20. 47	·1078					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Aug.29						
h m	° ′ ″	h m		h m		h m	°	°
		21. 13	·1073					
		21. 20	·1078					
		21. 33	·1076					
		21. 52	·1079					
			***					
		22. 29	·1088					
		22. 50	·1092					
		23. 7	·1090					
		23. 40	·1105					
		23. 44	·1105					
		23. 59	·1095					
Aug.30		Aug.30		Aug.30		Aug.30		
0. 0	20. 59. 10	0. 0	·1095		(†)	1. 0	62 ·1	62 ·0
0. 39	59. 50	0. 13	·1102	0. 31	·02758	3. 0	64 ·0	64 ·2
0. 46	20. 59. 20		(†)	1. 7	·02754	9. 0	66 ·8	66 ·7
0. 54	21. 1. 10	0. 48	·1098	1. 58	·02697	22. 15	64 ·0	65 ·0
1. 0	0. 20	0. 57	1103	4. 12	·02456			
1. 21	21. 1. 0	1. 2	·1100	4. 23	·02458			
1. 38	20. 58. 20	1. 9	·1105	4. 35	·02417			
2. 30	55. 0	1. 13	·1101	4. 42	·02423			
2. 36	56. 0	1. 53	·1100	4. 48	·02396			
2. 49	56. 0	2. 7	·1105	5. 18	·02390			
3. 0	54. 30	2. 12	·1101	5. 36	·02362			
3. 3	56. 0	2. 24	·1107	5. 55	·02358			
3. 16	54. 40	2. 32	·1102	6. 4	·02376			
3. 22	55. 35	2. 42	·1111	6. 19	·02320			
3. 28	53. 45	3. 2	·1111	7. 26	·02248			
3. 55	51. 0	3. 7	·1106	8. 3	·02287			
4. 8	53. 0	3. 14	·1120	9. 39	·02353			
4. 27	52. 5	3. 18	·1115	10. 56	·02364			
4. 30	53. 35	3. 31	·1115	11. 10	·02340			
4. 45	52. 10	3. 43	·1102	12. 37	·02353			
4. 52	53. 35	4. 14	·1122	13. 11	·02296			
5. 0	52. 10	4. 33	·1112	13. 33	·02273			
5. 22	53. 30	4. 41	·1134	15. 40	·02420			
5. 29	51. 10	4. 52	·1123	16. 33	·02427			
5. 35	51. 55	5. 0	·1133	16. 49	·02443			
5. 48	42. 50	5. 8	·1127	17. 41	·02457			
6. 4	36. 0	5. 30	·1143	18. 44	·02538			
6. 15	48. 0	5. 52	·1100	19. 7	·02546			
6. 35	44. 50	6. 4	·1106	21. 16	·02687			
6. 48	49. 0	6. 17	·1159	22. 2	·02710			
7. 0	47. 0	6. 34	·1130	23. 59	·02672			
7. 15	48. 35	6. 49	·1125					
7. 29	45. 50	7. 2	·1112					
7. 38	49. 0	7. 15	·1110					
7. 57	50. 0	7. 30	·1124					
8. 19	48. 35	8. 7	·1112					
8. 38	51. 0	8. 35	·1118					
9. 39	49. 30	9. 2	·1112					
10. 55	54. 20		(†)					
11. 38	47. 30	18. 17	·1094					
12. 27	52. 0	18. 30	·1084					
12. 46	20. 56. 45	18. 45	·1089					
12. 57	21. 0. 50	19. 2	·1107					
13. 14	20. 56. 0	19. 25	·1103					
13. 22	57. 25	19. 53	·1094					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 30		Aug. 30						
h m	° ′ ″	h m		h m		h m	°	°
14. 6	20. 43. 35	20. 20	·1078					
14. 10	44. 10	20. 32	·1077					
14. 32	42. 20	20. 41	·1081					
14. 44	44. 40	20. 57	·1082					
15. 4	45. 10	21. 17	·1071					
15. 44	56. 35	21. 25	·1080					
16. 0	54. 35	21. 39	·1066					
16. 13	56. 10	21. 51	·1074					
16. 42	53. 25	22. 0	·1074					
17. 9	58. 50	22. 13	·1091					
17. 18	58. 0	22. 28	·1079					
17. 28	59. 5	23. 8	·1089					
	***	23. 17	·1089					
17. 57	58. 5	23. 21	·1097					
18. 3	59. 0	23. 30	·1097					
18. 13	57. 55	23. 40	·1095					
18. 22	57. 50	23. 59	·1080					
18. 32	20. 56. 35							
19. 0	21. 0. 30							
19. 21	20. 56. 15							
19. 33	56. 5							
19. 43	54. 55							
20. 12	56. 0							
20. 35	54. 25							
20. 45	56. 35							
20. 55	54. 10							
20. 59	54. 55							
21. 20	52. 30							
21. 28	54. 55							
22. 3	53. 55							
22. 24	56. 55							
22. 30	56. 50							
22. 45	57. 30							
23. 6	57. 25							
23. 51	58. 40							
23. 59	58. 0							
Aug. 31		Aug. 31		Aug. 31		Aug. 31		
0. 0	20. 57. 55	0. 0	·1080	0. 0	·02672	9. 0	66·5	66·6
0. 38	55. 50	0. 7	·1084	0. 27	·02644	21. 0	57·6	58·1
0. 45	57. 0		(†)	1. 31	·02502			
1. 8	56. 55	0. 55	·1091	2. 11	·02430			
1. 28	55. 55	1. 1	·1088	2. 45	·02356			
1. 52	55. 30	1·35	·1088	2. 50	·02405			
2. 14	57. 0	1. 49	·1084	3. 48	·02592			
3. 10	56. 20	2. 4	·1091	4. 53	·02696			
3. 15	55. 20	2. 31	·1097	6. 13	·02782			
3. 22	56. 0	2. 52	·1088	9. 10	·02838			
3. 57	54. 50	3. 7	·1096	9. 57	·02817			
4. 3	55. 0	3. 14	·1092	12. 3	·02900			
4. 30	53. 25	3. 19	·1100	12. 54	·02972			
4. 42	51. 0	3. 43:	·1093	14. 59	·03204			
4. 49	52. 5	4. 15	·1105	15. 28	·03227			
5. 3	52. 0	4. 34	·1094	17. 15	·03473			
5. 53	52. 35	4. 43	·1102	17. 46	·03517			
6. 55	55. 0	5. 2	·1104	17. 57	·03474			
8. 0	54. 45	5. 34	·1098	19. 7	·03302			
8. 26	53. 25	5. 55	·1101	21. 34	·03047			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 31		Aug. 31		Aug. 31				
h m	° ′ ″	h m		h m		h m	°	°
8. 34	20. 53. 55	6. 6	·1100	22. 58	{·02966			
8. 50	52. 20	6. 26	·1097		{·02890			
9. 2	49. 25	6. 42	·1100	23. 59	·02867			
9. 20	53. 15	7. 7	·1097					
9. 30	52. 0	7. 21	·1101					
9. 54	55. 0	7. 48	·1097					
10. 20	49. 40	8. 1	·1102					
10. 35	52. 10	8. 30	·1100					
10. 53	51. 40	8. 44	·1104					
11. 24:	44. 0	8. 49	·1102					
11. 46	50. 0	9. 17	·1136					
11. 57	51. 0	9. 23	·1130					
12. 9	50. 0	9. 45	·1128					
12. 24	53. 40	10. 13	·1104					
12. 41	50. 0	10. 27	·1109					
12. 45	51. 20	10. 54	·1082					
12. 55	49. 0	11. 6	·1082					
13. 31	50. 0	11. 30	·1094					
14. 0	52. 10	11. 49	·1082					
14. 41	51. 5	12. 2	·1082					
15. 7	57. 0	12. 15	·1099					
15. 53	52. 0	12. 36	·1098					
16. 34	52. 10	12. 39	·1101					
16. 57	50. 25	12. 59	·1096					
17. 19	53. 25	13. 6	·1098					
17. 30	52. 40	13. 35	·1092					
17. 56	52. 0	13. 56	·1098					
18. 10	53. 35	14. 5	·1097					
18. 26	54. 0	14. 12	·1100					
18. 38	55. 10	14. 42	·1094					
19. 14	52. 10	14. 54	·1098					
19. 29	49. 0	15. 31	·1098					
19. 38	50. 0	15. 40	·1101					
19. 48	49. 5	15. 49	·1099					
20. 20	49. 45	16. 33	·1114					
20. 33	52. 0	16. 48	·1106					
20. 57	50. 25	17. 7	·1106					
21. 8	51. 30	17. 46	·1085					
21. 27	50. 0	18. 3	·1090					
22. 13	51. 30	18. 10	·1087					
22. 29	52. 35	18. 25	·1087					
22. 59	53. 0	18. 32	·1091					
23. 12	52. 30	18. 52	·1091					
23. 43	53. 20	19. 0	·1087					
	(†)	19. 11	·1091					
		19. 21	·1088					
		19. 35	·1102					
		19. 49	·1093					
		20. 5	·1094					
		20. 25	·1094					
			(†)					
		21. 0	·1087*					
		22. 32	·1089					
		22. 40	·1086					
		22. 45	·1090					
		22. 50	·1088					
		23. 6	·1090					
		23. 15	·1087					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
h m	° ′ ″	Aug. 31 h m		h m		h m	°	°
		23. 45	·1088 (†)					
Sept. 1		Sept. 1		Sept. 1		Sept. 1		
1. 0	20. 55. 58*	1. 0	·1089*	0. 0	·02867	1. 0	60·8	60·8
3. 0	55. 32*	3. 0	·1117*	1. 57	·02856	3. 0	62·7	62·5
9. 0	42. 57*	9. 0	·1131*	6. 8	·02573	9. 0	64·0	64·0
21. 0	46. 36*	21. 0	·1097*	9. 31	·02422	21. 0	61·0	61·1
				10. 6	·02425			
				10. 19	·02382			
				10. 49	·02390			
				11. 5	·02358			
				11. 25	·02362			
				11. 36	·02380			
				12. 14	·02395			
				12. 57	·02478			
				15. 20	·02602			
				15. 43	·02597			
				17. 37	·02700			
				20. 26	·02783 ·02590			
				22. 17	·02602			
				23. 59	·02557			
Sept. 2		Sept. 2		Sept. 2		Sept. 2		
	(†)		(†)	0. 0	·02557	1. 0	63·1	63·2
0. 38	20. 53. 25	0. 57	·1105	1. 51	·02498	3. 0	65·0	65·1
1. 33	53. 55	1. 24	·1103	4. 29	·02260	9. 0	66·1	66·0
4. 15	48. 15	1. 41	·1105	8. 15:	·02044	21. 0	58·0	58·1
4. 48	48. 35	1. 58	·1101	11. 51	·02142	22. 0	58·8	58·5
5. 35	47. 20	2. 5	·1104	12. 27	·02163	23. 0	59·5	59·0
5. 54	48. 0	2. 40	·1101	15. 11	·02357			
6. 30	48. 0	3. 4	·1102	17. 16	·02482			
7. 17	49. 50	3. 58	·1099	19. 37	·02711 ·02680			
7. 28	49. 15	4. 15	·1096					
7. 45	50. 25	5. 26:	·1107	20. 17	·02741 ·02690			
7. 57	50. 5	6. 30	·1105					
8. 48	51. 15	6. 47	·1111	21. 5	·02724 ·02698			
9. 0	50. 40	7. 3	·1110					
9. 49	51. 45	7. 9	·1112	22. 24	·02730 (†)			
10. 0	51. 0	7. 19	·1120					
10. 42	51. 0	7. 30	·1112					
10. 50	51. 30	7. 45	·1128					
11. 3	50. 0	7. 49	·1124					
11. 40	49. 10	7. 54	·1126					
12. 1	51. 10	8. 18	·1119					
12. 38	48. 20	8. 36	·1120					
14. 53	48. 10	8. 58	·1116					
15. 8	49. 5	9. 12	·1115					
15. 18	47. 55	9. 21	·1111					
15. 30	48. 55	9. 39	·1113					
16. 57	48. 30		***					
17. 4	47. 10	10. 2	·1112					
17. 11	48. 0	10. 32	·1114					
17. 20	47. 10	10. 41	·1128					
17. 35	48. 0	11. 1	·1122					
17. 56	46. 15	11. 32	·1118					
18. 45	47. 5	12. 2:	·1126					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
Sept. 2		Sept. 2						
h m	° ′ ″	h m		h m		h m	°	°
18. 53	20. 41. 40	12. 28	·1117					
19. 3	47. 55	12. 35	·1117					
19. 17	46. 50	12. 56	·1109					
19. 27	47. 30		***					
20. 26	43. 0	16. 18	·1102					
20. 36	43. 0	16. 51	·1107					
21. 18	47. 40	16. 56	·1104					
21. 27	46. 35	17. 31	·1103					
22. 42	51. 10	18. 14	·1108					
23. 3	54. 35	19. 9	·1092					
23. 30	56. 20	19. 38	·1100					
23. 40	58. 0	20. 15	·1096					
23. 45	57. 15	20. 56	·1099					
23. 59	57. 30	21. 34	·1096					
		21. 52	·1099					
		22. 32	·1083					
		23. 12	·1088					
		23. 22	·1095					
		23. 40	·1097					
		23. 59	·1102					
Sept. 3		Sept. 3		Sept. 3		Sept. 3		
0. 0	20. 57. 35	0. 0	·1102		(†)	0. 0	60·3	59·6
0. 30	57. 0	0. 12	·1108	0. 14	·02022	1. 0	61·4	60·4
	***		(†)	1. 27	·02000	2. 0	62·5	61·6
1. 14	58. 0	1. 0	·1113*	3. 4	·01867	3. 0	62·8	61·9
	***	2. 17	·1111	4. 33	·01963	6. 0	63·0	62·4
2. 3	55. 5	2. 32	·1102	4. 43	·01960	9. 0	61·5	61·8
2. 13	55. 50	2. 45	·1102	5. 14	·02032	12. 0	59·5	59·2
2. 22	55. 0	2. 53	·1105	5. 45	·02040	18. 0	54·1	54·5
2. 43	54. 0	3. 3	·1095	6. 9	·02058 ·02618	21. 0	55·6	55·8
3. 12	52. 55	3. 18	·1111			22. 0	56·4	56·3
3. 37	50. 0	3. 28	·1116	7. 58	·02596	23. 0	57·3	57·0
3. 59	53. 5	3. 48	·1121	8. 9	·02562			
4. 14	52. 0	4. 0	·1112	8. 25	·02583			
4. 26	49. 0	4. 22	·1127	9. 0	·02536			
4. 34	51. 15	4. 40	·1107	9. 13	·02530			
5. 4	44. 0	5. 0	·1137	11. 6	·02618			
5. 38	52. 0	5. 33	·1106	12. 1	·02620			
5. 53	49. 50	5. 47	·1100	12. 18	·02646			
5. 58	51. 0	5. 55	·1108	12. 43	·02633			
6. 8	49. 25	6. 4	·1104	13. 33	·02694			
6. 15	50. 15	6. 11	·1111	14. 33	·02700			
6. 23	51. 0	6. 19	·1107	15. 29	·02782			
6. 30	52. 0	6. 25	·1110	16. 0	·02800			
6. 45	50. 20	6. 38	·1101	16. 27	·02798			
6. 57	51. 0	6. 46	·1105	18. 27	·02672			
7. 12	49. 0	6. 56	·1106	18. 30	·02650			
7. 18	49. 25	7. 12	·1103	18. 57	·02676			
7. 50	47. 20	7. 21	·1097	20. 4	·02620			
8. 0	48. 15	7. 36	·1100	20. 6	·02582			
8. 23	33. 40	7. 57	·1111	20. 44	·02610			
8. 57	51. 50	8. 10	·1093	20. 58	·02576			
9. 2	51. 5	8. 39	·1136	21. 37	·02584			
9. 12	53. 30	9. 12	·1092	21. 41	·02570			
9. 25	48. 25	9. 21	·1099	22. 2	·02577			
9. 30	48. 45	9. 35	·1098		(†)			
9. 41	47. 50	9. 50	·1104					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 1. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 3		Sept. 3						
h m	° ′ ″	h m		h m		h m	°	°
9. 58	20. 50. 20	10. 3	·1098					
10. 13	49. 20	10. 44	·1107					
10. 43	52. 15	10. 53	·1106					
11. 4	52. 55	11. 16	·1114					
11. 26	49. 35	11. 23	·1112					
11. 31	49. 20	11. 36	·1115					
11. 46	47. 50	12. 1	·1106					
12. 2	40. 25	12. 13	·1117					
12. 33	50. 45	12. 28	·1120					
12. 56	45. 0	12. 47	·1099					
13. 14	45. 30	13. 4	·1108					
14. 30	54. 30	13. 18	·1100					
15. 9	53. 0	13. 27	·1106					
	***	13. 50	·1110					
15. 14	53. 35	14. 5	·1099					
16. 7	48. 20	14. 38	·1101					
16. 22	49. 0	15. 6	·1115					
16. 30	48. 0	15. 17	·1111					
16. 45	47. 50	15. 27	·1109					
16. 52	48. 35	15. 45	·1101					
17. 4	48. 5	15. 53	·1102					
17. 32	48. 30	16. 7	·1098					
17. 39	47. 50	16. 26	·1100					
18. 12	47. 15	16. 32	·1105					
18. 15	48. 0	16. 37	·1101					
18. 22	46. 0	16. 49	·1109					
18. 42	47. 10	17. 1	·1107					
19. 2	45. 40	17. 20	·1095					
19. 20	48. 0	17. 24	·1098					
20. 3	45. 0	17. 33	·1094					
20. 45	48. 0	17. 56	·1097					
20. 57	50. 30	18. 29	·1097					
21. 41	53. 55	18. 54	·1081					
22. 26	52. 20	19. 10	·1078					
23. 0	57. 0	19. 29	·1081					
23. 28	57. 15	19. 42	·1078					
	(†)	20. 4	·1083					
		20. 51	·1067					
		21. 33	·1074					
		21. 45	·1072					
		21. 50	·1074					
		22. 4	·1068					
		22. 15	·1072					
		22. 33	·1070					
		22. 44	·1076					
		23. 0	·1071					
		23. 6	·1076					
		23. 15	·1071					
		23. 32	·1075					
			(†)					
Sept. 4		Sept. 4		Sept. 4		Sept. 4		
1. 0	20. 55. 45*	1. 0	·1098*		(†)	0. 0	58 ·4	58 ·0
3. 0	55. 4*	3. 0	·1095*	1. 0	·01931*	1. 0	59 ·5	59 ·5
9. 0	44. 8*	9. 0	·1114*	3. 0	·01821*	3. 0	61 ·7	62 ·0
21. 0	50. 16*	21. 0	·1086*	9. 0	·02403*	9. 0	62 ·5	62 ·2
				13. 33	·02627	21. 0	56 ·1	56 ·7
				14. 20	·02649			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 5		Sept. 5		Sept. 4		Sept. 5		
h m	° ′ ″	h m		h m		h m	°	°
	(†)		(†)	14. 56	·02695	1. 0	59 ·9	60 ·0
0. 20	20. 54. 35	0. 19	·1108	15. 21	·02693	3. 0	62 ·1	62 ·0
0. 28	54. 10	1. 36	·1104	17. 14	·02826	9. 0	62 ·8	63 ·5
1. 32	55. 0	1. 58	·1106	18. 44	·02955	21. 0	59 ·0	59 ·1
1. 51	56. 30	2. 26	·1102	19. 43	·03044			
2. 0	54. 10	2. 34	·1115	20. 4	·03053			
2. 2	54. 50	2. 51	·1111	21. 57	·02840			
2. 15	52. 45	3. 3	·1116	22. 15	·02836			
2. 22	53. 15	3. 24	·1114	22. 31	·02795			
2. 39	52. 0	3. 42	·1116		·02690			
2. 48	52. 20	4. 4	·1102	22. 54	·02677			
3. 7	52. 0	4. 15	·1108		(†)			
3. 32	52. 50	4. 24	·1111					
	***	4. 37	·1105					
3. 59	51. 35	4. 45	·1109					
	***	5. 10	·1111					
4. 41	52. 5	5. 46	·1122					
5. 11	51. 0	6. 10	·1111					
5. 23	49. 50	6. 45	·1135					
5. 48	50. 25	7. 1	·1115					
6. 23	41. 30	7. 22	·1119					
6. 45	46. 55	7. 32	·1115					
7. 1	46. 10	7. 45	·1113					
7. 23	49. 45	7. 58	·1118					
7. 30	49. 15	8. 22	·1116					
8. 16	51. 10	8. 29	·1118					
8. 59	51. 0	8. 59	·1118					
9. 57	51. 25	9. 11	·1116					
11. 3	48. 40	9. 53	·1119					
11. 25	45. 25	10. 28	·1120					
11. 39	46. 55	10. 39	·1124					
12. 42	46. 35	10. 58	·1120					
14. 3	53. 35	11. 21	·1128					
14. 47	49. 35	12. 27	·1111					
14. 59	49. 25	12. 39	·1112					
15. 24	47. 15	13. 5	·1108					
16. 20	47. 15	13. 22	·1112					
16. 45	48. 0	13. 37	·1112					
19. 12	46. 10	13. 59	·1125					
19. 37	49. 0	14. 28	·1118					
19. 50	48. 40	14. 53	·1118					
20. 37	49. 45	15. 0	·1120					
21. 4	53. 55	15. 23	·1113					
21. 35	53. 0	15. 36	·1115					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

September 4. The Photographic Traces for the Declination and Horizontal Force Magnets were totally lost, owing to defects in the paper.

September 5. The Photographic Trace for the Vertical Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 5		Sept. 5						
h m	° ′ ″	h m		h m		h m	°	°
21. 58	20. 55. 0	15. 53	·1113					
22. 25	56. 0	16. 17	·1115					
22. 48	54. 55	16. 47	·1115					
23. 59	54. 40	17. 19	·1111					
		17. 48	·1109					
		18. 5	·1105					
		18. 17	·1107					
		18. 25	·1103					
		18. 49	·1107					
		19. 9	·1104					
		19. 33	·1103					
		20. 0	·1096					
		20. 48	·1087					
		21. 2	·1081					
		21. 23	·1077					
		21. 48	·1090					
		22. 3	·1091					
		22. 26	·1096					
		23. 6	·1098					
		23. 59	·1107					
Sept. 6		Sept. 6		Sept. 6		Sept. 6		
0. 0	20. 54. 40	1. 0	·1108*		(†)	1. 0	61 ·2	61 ·5
0. 35	54. 20	3. 0	·1113*	0. 21	·02584	3. 0	62 ·4	62 ·6
1. 42	51. 10	9. 0	·1116*	1. 33	·02550	9. 0	63 ·5	63 ·6
3. 44	48. 0	21. 0	·1080*	5. 28	·02342	21. 0	60 ·1	60 ·2
4. 28	47. 10		(†)		(†)			
6. 15	48. 10	22. 19	·1088	9. 0	·02189*			
6. 46	47. 15	22. 27	·1093	21. 0	·02545*			
7. 15	48. 5	22. 44	·1093	23. 10	·02546			
8. 3	47. 40	23. 6	·1092	23. 59	·02542			
9. 38	47. 40	23. 52	·1104					
10. 57	46. 35	23. 59	·1102					
12. 28	48. 30							
13. 52	49. 0							
	(†)							
21. 0	47. 11*							
22. 19	52. 35							
22. 29	52. 35							
23. 4	56. 0							
23. 21	55. 10							
23. 53	56. 0							
23. 59	55. 50							
Sept. 7		Sept. 7		Sept. 7		Sept. 7		
0. 0	20. 55. 50	0. 0	·1102	0. 0	·02542	8. 32	66 ·7	66 ·2
0. 18	54. 45	0. 14	·1098	2. 37	·02462	21. 0	60 ·0	60 ·3
0. 45	56. 0	0. 34	·1113	5. 18	·02260			
1. 36	53. 10	1. 37	·1092	7. 21	·02142			
1. 59	53. 35	1. 45	·1095	9. 18	·02250			
2. 12	53. 10	2. 1	·1093	11. 5	·02292			
2. 33	53. 50	2. 35	·1099	11. 27	·02248			
	(†)	3. 4	·1100	14. 15	·02358			
5. 38	49. 0	3. 53	·1100	14. 36	·02353			
6. 8	48. 55	4. 7	·1105	15. 40	·02420			
6. 37	45. 5	4. 53	·1100	20. 12	·02738			
7. 9	49. 0	5. 12	·1096	22. 2	·02820			
	(†)	5. 38	·1105	23. 59	·02848			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 7		Sept. 7						
h m	° ′ ″	h m		h m		h m	°	°
8. 0	20. 47. 15	5. 58	·1103					
8. 26	49. 0	6. 8	·1105					
9. 0	47. 35	6. 29	·1100					
9. 19	48. 20	6. 43	·1106					
9. 53	47. 0	7. 1	·1110					
10. 27	48. 0	7. 20	·1106					
10. 45	47. 40	7. 48	·1104					
11. 7	49. 0	7. 53	·1107					
11. 30	46. 55	8. 7	·1101					
11. 52	48. 20	8. 33	·1103					
12. 11	46. 50	9. 0	·1102					
13. 4	47. 20	9. 9	·1105					
13. 39	46. 30	9. 54	·1101					
14. 3	53. 25	10. 15	·1107					
14. 35	47. 0	10. 32	·1102					
15. 11	48. 20	10. 44	·1102					
15. 30	47. 0	10. 57	·1128					
16. 16	46. 30	11. 24	·1102					
17. 34	47. 30	11. 37	·1106					
19. 22	46. 10	12. 2	·1100					
21. 25	48. 25	12. 34	·1107					
23. 12	54. 25	12. 56	·1104					
23. 59	54. 10	13. 5	·1107					
		13. 18	·1105					
		13. 28	·1107					
		13. 45	·1105					
		14. 22	·1115					
		14. 59	·1105					
		15. 22	·1109					
		16. 18	·1108					
		16. 41	·1111					
		17. 15	·1108					
		17. 34	·1105					
		17. 37	·1111					
		17. 45	·1109					
		17. 54	·1113					
		18. 42	·1100					
		19. 30	·1096					
		19. 47	·1099					
		22. 4	·1100					
		22. 16	·1098					
		22. 40	·1099					
		23. 0	·1095					
		23. 9	·1099					
		23. 48	·1100					
		23. 59	·1101					
Sept. 8		Sept. 8		Sept. 8		Sept. 8		
0. 0	20. 54. 10	0. 0	·1101	0. 0	·02848	1. 0	63 ·5	63 ·6
2. 45	49. 40	0. 8	·1101	1. 15	·02635	3. 0	65 ·9	65 ·8
3. 45	49. 30	0. 35	·1108	3. 21	·02424	9. 0	68 ·2	68 ·0
4. 7	48. 50	0. 50	·1106	5. 57	·02280	21. 0	64 ·0	64 ·1
7. 23	50. 20	1. 30	·1107	6. 28	·02278			
7. 37	49. 50	1. 45	·1106	6. 48	·02250			
8. 11	50. 30	2. 5	·1106	8. 12	·02192			
8. 56	49. 0	2. 45	·1102	12. 10	·02222			
9. 30	49. 25	3. 53	·1111	13. 49	·02258			
10. 4	39. 0	4. 5	·1102	14. 20	·02253			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 6. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 8		Sept. 8		Sept. 8				
h m	° ′ ″	h m		h m		h m	°	°
10. 59	20. 47. 25	4. 15	·1104	15. 40	·02306			
11. 14	47. 0	4. 22	·1102	18. 51	·02502			
11. 30	47. 35	5. 32	·1105	22. 18	·02632			
11. 52	46. 50	5. 48	·1108	23. 34	·02608			
13. 8	48. 0	6. 3	·1105		(†)			
13. 44	46. 40	6. 13	·1107					
13. 54	47. 10	6. 23	·1105					
14. 7	46. 20	6. 41	·1108					
14. 37	48. 20	7. 7	·1103					
15. 0	44. 15	7. 31	·1113					
15. 9	44. 20	8. 15	·1105					
15. 52	47. 20	8. 23	·1107					
15. 59	46. 0	8. 40	·1105					
16. 7	48. 15	9. 24	·1108					
16. 10	47. 0	9. 40	·1097					
16. 19	48. 40	10. 4	·1123					
16. 45	45. 0	10. 26	·1108					
17. 46	47. 10	10. 37	·1111					
18. 0	44. 10	10. 51	·1110					
18. 5	44. 50	11. 9	·1105					
18. 13	44. 0	11. 18	·1107					
18. 16	46. 25	11. 42	·1102					
	***	11. 55	·1104					
18. 45	47. 50	12. 55	·1101					
18. 56	46. 55	13. 3	·1109					
19. 0	47. 30	13. 17	·1105					
19. 6	45. 0	13. 28	·1107					
19. 19	44. 35	13. 53	·1108					
19. 24	45. 50	14. 0	·1115					
19. 31	44. 55	14. 7	·1111					
20. 13	48. 45	14. 15	·1116					
20. 40	57. 15	14. 23	·1114					
20. 46	56. 15	14. 34	·1116					
20. 53	57. 50	14. 42	·1107					
21. 0	57. 15	15. 9	·1104					
	***	15. 27	·1108					
21. 23	59. 35	15. 33	·1105					
21. 46	56. 0	15. 42	·1117					
21. 56	51. 0	15. 47	·1108					
22. 9	55. 20	15. 56	·1119					
22. 14	54. 40	16. 0	·1117					
22. 24	58. 5	16. 10	·1120					
22. 31	58. 50	16. 43	·1108					
22. 48	58. 20	17. 15	·1106					
22. 59	55. 0	17. 25	·1113					
23. 7	58. 10	17. 30	·1105					
23. 18	20. 56. 0	17. 53	·1125					
23. 37	21. 3. 0	18. 0	·1117					
23. 43	2. 35	18. 36	·1102					
23. 53	5. 45	18. 41	·1107					
23. 59	5. 10	18. 45	·1102					
		18. 52	·1106					
		19. 2	·1101					
		19. 6	·1104					
		19. 27	·1098					
		19. 43	·1079					
		20. 14	·1065					
		20. 38	·1075					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V. F. Magnet.
		Sept. 8						
h m	° ′ ″	h m		h m		h m	°	°
		21. 0	·1074					
		21. 16	·1079					
		21. 22	·1072					
		21. 44	·1099					
		21. 50	·1089					
		22. 5	·1112					
			***					
		22. 28	·1090					
		22. 37	·1089					
			***					
		22. 49	·1084					
			***					
		23. 5	·1059					
		23. 8	·1077					
		23. 14	·1060					
		23. 17	·1072					
			***					
		23. 28	·1058					
		23. 35	·1070					
		23. 56	·1077					
			(†)					
Sept. 9		Sept. 9		Sept. 9		Sept. 9		
0. 0	21. 5. 15		(†)		(†)	1. 0	67 ·5	67 ·2
0. 30	6. 0	1. 0	·1108*	0. 6	·02748	3. 0	69 ·3	69 ·0
0. 33	7. 45	1. 6	·1098	1. 31	·02720	9. 0	69 ·2	68 ·9
0. 51	6. 0		***	1. 41	·02688	21. 0	62 ·7	63 ·1
1. 0	9. 10	1. 27	·1098	2. 22	·02672	22. 0	62 ·2	63 ·0
1. 26	8. 25	1. 42	·1078	2. 30	·02640	23. 0	62 ·0	62 ·8
1. 27	11. 0	2. 12	·1101	2. 37	·02658			
1. 38	3. 25	2. 18	·1117	2. 42	·02618			
1. 53	0. 30	2. 28	·1093	3. 12	·02560			
2. 10	0. 5	2. 33	·1121	3. 29	·02555			
2. 14	21. 1. 10	2. 41	·1093	3. 37	·02507			
2. 24	20. 59. 10	3. 1	·1106	3. 40	·02562			
2. 33	21. 3. 30	3. 6	·1091	4. 6	·02690			
2. 38	21. 0. 0	3. 22	·1116	4. 9	·02700			
2. 54	20. 58. 10	3. 30	·1077	4. 35	·02802			
2. 57	59. 0	3. 35	·1101	4. 44	·02824			
3. 4	56. 5	3. 39	·1101	5. 34	·02933			
3. 21	59. 45	4. 1	·1145	5. 41	·02962			
3. 27	54. 20	4. 13	·1122	5. 54	·02970			
3. 30	57. 30	4. 16	·1120	6. 3	·02982			
3. 43	56. 55	4. 22	·1109	6. 38	·03017			
3. 59	59. 35	4. 33	·1118	6. 51	·03040			
4. 7	57. 0	4. 45	·1089	8. 9	·03043			
4. 12	57. 25	5. 0	·1090	9. 13	{·03036			
4. 20	55. 40	5. 13	·1096		{·03212			
4. 28	57. 10	5. 17	·1109	11. 2	·03220			
4. 41	53. 5	5. 31	·1096	12. 31	·03270			
5. 5	52. 0	5. 36	·1111	14. 40	·03376			
5. 15	56. 55	5. 42	·1107	15. 0	·03362			
5. 27	53. 45	5. 48	·1084	15. 8	·03377			
5. 35	54. 50	5. 55	·1087	15. 25	·03370			
5. 49	50. 15	6. 2	·1176	15. 38	·03392			
6. 14	52. 20	6. 13	·1078	16. 3	·03404			
6. 43	50. 5	6. 21	·1085	17. 58	·03580			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 9		Sept. 9		Sept. 9				
h m	° ′ ″	h m		h m		h m	°	°
7. 4	20. 52. 35	6. 28	·1079	20. 49	·03717			
7. 53	54. 30	6. 45	·1083	22. 41	·03840			
8. 14	53. 40	7. 5	·1111	23. 51	·03852			
8. 28	49. 45	7. 15	·1100		(†)			
8. 45	53. 35	7. 25	·1104					
9. 9	51. 0	7. 34	·1100					
9. 28	51. 25	7. 43	·1107					
9. 51	48. 25	7. 51	·1106					
11. 30	51. 25	8. 9	·1100					
12. 18	50. 40	8. 15	·1096					
12. 30	48. 30	8. 22	·1096					
12. 56	50. 0	8. 30	·1107					
14. 3	48. 55	8. 43	·1112					
14. 32	52. 5	9. 17	·1096					
14. 53	49. 45	9. 32	·1100					
15. 3	50. 30	9. 46	·1092					
15. 21	49. 40	9. 54	·1096					
15. 36	52. 20	10. 37	·1098					
16. 6	51. 10	10. 52	·1096					
16. 22	49. 20	11. 10	·1098					
16. 27	50. 5	11. 22	·1097					
16. 42	50. 10	11. 40	·1101					
16. 56	49. 20	11. 57	·1098					
17. 30	50. 20	12. 13	·1100					
18. 45	49. 35	12. 22	·1113					
18. 57	50. 25	12. 34	·1096					
19. 6	48. 35	12. 37	·1101					
19. 27	51. 10	12. 56	·1098					
19. 44	50. 20	13. 5	·1104					
19. 57	52. 30	13. 12	·1113					
20. 27	52. 40	13. 15	·1107					
23. 13	58. 20	13. 28	·1113					
23. 57	58. 20	13. 34	·1108					
	(†)	13. 50	·1113					
		13. 54	·1102					
		13. 58	·1106					
		14. 2	·1102					
		14. 31	·1100					
		14. 44	·1105					
		15. 0	·1099					
		15. 10	·1100					
		15. 24	·1096					
		15. 45	·1107					
		16. 23	·1101					
		16. 32	·1104					
		17. 25	·1099					
		18. 55	·1092					
		19. 4	·1096					
		19. 13	·1089					
		19. 24	·1096					
		19. 51	·1092					
		20. 1	·1093					
		21. 4	·1079					
		22. 20	·1084					
		22. 39	·1082					
		23. 7	·1073					
		23. 24	·1077					
		23. 33	·1077					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Sept. 9						
h m	° ′ ″	h m		h m		h m	°	°
		23. 47	·1081					
		23. 59	·1090					
Sept. 10		Sept. 10		Sept. 10		Sept. 10		
0. 0	20. 57. 35	0. 0	·1090		(†)	0. 0	62 ·0	62 ·6
1. 14	57. 25		(†)	0. 30	·03852	1. 0	62 ·2	62 ·8
1. 27	58. 10	1. 0	·1081*		·03124	2. 0	62 ·2	62 ·8
1. 55	56. 15	1. 7	·1089	3. 33	·03155	3. 0	62 ·3	62 ·8
2. 4	58. 0	1. 33	·1094	5. 2	·03088	6. 0	62 ·1	62 ·2
2. 18	56. 20	2. 0	·1096	8. 17	·03057	9. 0	60 ·2	61 ·0
2. 23	59. 40	2. 12	·1117	9. 38	·03117	12. 0	59 ·0	59 ·9
2. 31	56. 40	2. 22	·1107	11. 10	·03202	21. 0	53 ·5	54 ·5
2. 35	56. 50	2. 30	·1124	13. 19	·03278	22. 0	53 ·8	54 ·5
2. 45	54. 30		***	13. 41	·03270	23. 0	54 ·3	55 ·0
3. 45	49. 15	2. 39	·1109	14. 19	·03290			
3. 55	49. 20	2. 44	·1111	16. 33	·03172			
4. 4	48. 25	2. 59	·1102	19. 31	·02896			
4. 35	50. 35	3. 19	·1096	19. 50	·02912			
5. 18	49. 0	3. 34	·1100	20. 25	·02843			
5. 42	49. 10	3. 48	·1096	20. 39	·02854			
5. 59	50. 30	4. 9	·1110	21. 16	·02802			
6. 27	50. 30		***	21. 32	·02820			
6. 42	51. 0	4. 42	·1113	22. 6	·02788			
7. 3	49. 45	4. 53	·1112	22. 12	·02742			
7. 15	49. 40	5. 9	·1117	22. 57	·02777			
7. 23	50. 5	5. 16	·1109		(†)			
7. 34	49. 30	5. 42	·1114					
7. 53	50. 45	5. 52	·1125					
	***	6. 9	·1118					
9. 41	51. 0	6. 34	·1130					
10. 39	50. 0	7. 1	·1120					
11. 2	50. 55	7. 21	·1121					
12. 0	48. 10	7. 43	·1128					
12. 33	48. 0	8. 24	·1123					
13. 10	52. 25	9. 0	·1123					
13. 48	47. 0	9. 40	·1124					
14. 15	50. 0	9. 57	·1125					
15. 7	47. 10	10. 34	·1123					
15. 33	48. 0	11. 15	·1128					
	***	11. 50	·1124					
17. 6	46. 40	12. 29	·1123					
17. 41	47. 15	13. 9	·1130					
	***	14. 7	·1120					
19. 38	47. 10	14. 39	·1125					
19. 57	48. 10	15. 0	·1122					
20. 38	47. 30	16. 38	·1123					
	***		***					
22. 38	54. 25	18. 26	·1122					
23. 47	55. 45	18. 40	·1119					
23. 59	55. 25	19. 30	·1114					
		19. 45	·1108					
		20. 10	·1105					
		20. 52	·1104					
		21. 8	·1100					
		21. 46	·1101					
		22. 10	·1096					
			***					
		22. 33	·1105					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Sept. 10 h m		h m		h m	°	°
		22. 46	·1103					
		23. 7	·1106					
		23. 34	·1106					
		23. 59	·1086					
Sept. 11		Sept. 11		Sept. 11		Sept. 11		
0. 0	20. 55. 25	0. 0	·1086		(†)	0. 0	55 ·0	55 ·6
0. 3	55. 15	0. 15	·1092	1. 0	·02835*	1. 0	56 ·0	57 ·0
0. 27	54. 35	0. 19	·1086	1. 30	·02736	3. 0	58 ·8	59 ·0
0. 38	55. 20	0. 27	·1090	3. 22	·02614	9. 0	60 ·0	60 ·0
1. 35	53. 55	1. 28	·1095	7. 5	·02230	21. 0	54 ·5	55 ·0
1. 58	55. 30	1. 41	·1095	7. 20	·02222			
2. 28	53. 10	1. 53	·1107	9. 48	·02435			
3. 2	53. 55	2. 11	·1098	10. 0	·02438			
3. 23	52. 15	2. 28	·1097	10. 18	·02470			
3. 38	51. 55	3. 3	·1119	14. 15	·02560			
4. 15	48. 15	3. 25	·1109	14. 56	·02548			
4. 34	48. 30	3. 38	·1116	18. 7	·02684			
4. 53	48. 0	4. 12	·1105	22. 12	·02805			
5. 42	48. 10	4. 23	·1104	22. 54	·02772			
6. 54	46. 25	5. 15	·1122	23. 30	·02780			
7. 44	46. 45	5. 47	·1126		(†)			
8. 12	42. 35	6. 4	·1125					
8. 28	42. 55	6. 17	·1132					
8. 38	43. 35	6. 30	·1122					
8. 53	43. 10	6. 45	·1124					
9. 0	43. 50	6. 58	·1120					
9. 26	39. 10	7. 15	·1123					
9. 40	39. 45	7. 41	·1120					
9. 53	38. 40	8. 0	·1130					
10. 25	46. 10	8. 10	·1126					
10. 38	42. 45	8. 18	·1135					
10. 56	46. 10	8. 40	·1123					
11. 16	55. 45	8. 50	·1138					
11. 35	45. 25	9. 3	·1136					
11. 51	39. 50	9. 35	·1109					
12. 14	48. 35	9. 41	·1110					
	***	9. 56	·1098					
12. 42	46. 5	10. 8	·1103					
13. 18	48. 35	10. 19	·1100					
13. 28	48. 0	10. 44	·1112					
13. 43	49. 0	10. 58	·1105					
14. 0	48. 20	11. 16	·1117					
14. 4	46. 50	11. 26	·1108					
14. 30	50. 0	11. 45	·1122					
14. 53	49. 0	11. 54	·1113					
15. 27	53. 30	12. 6	·1121					
15. 47	51. 50	12. 24	·1110					
16. 2	48. 5	12. 33	·1112					
16. 52	50. 20	12. 55	·1108					
17. 42	48. 20	13. 45	·1115					
17. 51	48. 55	13. 50	·1113					
17. 58	46. 55	14. 9	·1118					
	***	14. 15	·1115					
19. 43	46. 25	14. 37	·1113					
19. 53	47. 35	14. 47	·1108					
20. 54	47. 0	15. 6	·1111					
21. 50	51. 0	15. 22	·1102					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 11 h m	° ′ ″	Sept. 11 h m		h m		h m	°	°
22. 2	20. 50. 30	15. 52	·1114					
22. 16	53. 50	16. 15	·1114					
22. 28	52. 25	16. 33	·1109					
22. 53	55. 0	17. 13	·1118					
23. 8	55. 0	17. 53	·1122					
23. 26	56. 30	18. 0	·1115					
23. 59	55. 25	18. 11	·1119					
		18. 46	·1119					
		21. 1	·1105					
		21. 19	·1098					
		21. 50	·1093					
		22. 1	·1080					
		22. 27	·1085					
		22. 49	·1080					
		23. 4	·1081					
		23. 32	·1095					
		23. 42	·1097					
		23. 45	·1095					
		23. 59	·1096					
Sept. 12		Sept. 12		Sept. 12		Sept. 12		
0. 0	20. 55. 15	0. 0	·1096		(†)	1. 0	59 ·7	59 ·8
0. 26	54. 35	0. 29	·1099	0. 22	·02377	3. 0	63 ·0	63 ·6
2. 53	54. 35	0. 46	·1112	1. 42	·02296	9. 0	65 ·9	65 ·5
3. 26	53. 40	1. 11	·1127	3. 4	·01998	21. 0	62 ·8	62 ·7
5. 29	52. 20	1. 15	·1123	3. 43	·01862			
	***	1. 35	·1127		·01888			
6. 45	52. 35	2. 11	·1123	4. 30	·02020			
	***	2. 47	·1128	7. 17:	·02516			
7. 21	51. 45	3. 26	·1122	10. 2	·02692			
7. 56	48. 25	3. 35	·1126	13. 4	·02744			
	***	4. 3	·1128	16. 20	·02870			
9. 15	52. 0	4. 15	·1126	18. 42	·02946			
	***	5. 2	·1122	21. 15	·03000			
12. 26	51. 0	5. 8	·1125	23. 59	·02957			
	***	5. 22	·1124					
14. 21	53. 0		***					
14. 54	52. 50	6. 42	·1124					
15. 28	51. 10	6. 54	·1121					
17. 44	49. 25	7. 30	·1120					
19. 56	44. 15	7. 45	·1125					
21. 44	50. 0	8. 7	·1119					
22. 30	51. 30	8. 43	·1120					
22. 53	53. 25	9. 0	·1123					
23. 45	57. 0	9. 8	·1121					
23. 52	57. 0	9. 25	·1121					
23. 59	57. 30	10. 31	·1118					
		11. 22	·1119					
		11. 37	·1118					
		13. 35	·1115					
		14. 7	·1117					
		14. 8	·1114					
		14. 22	·1113					
		15. 0	·1115					
		15. 37	·1113					
		16. 8	·1115					
		16. 23	·1115					
		17. 29	·1117					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Sept. 12 h m		h m		h m	°	°
		19. 0	·1109					
		20. 41	·1091					
		21. 1	·1090					
		22. 3	·1091					
		23. 37	·1095					
		23. 48	·1095					
		23. 54	·1107					
		23. 59	·1107					
Sept. 13		Sept. 13		Sept. 13		Sept. 13		
0. 0	20. 57. 30	0. 0	·1107	0. 0	·02957	1. 0	65·2	64·8
0. 15	58. 30	0. 11	·1107	1. 43	·02888	3. 0	67·0	66·6
1. 15	57. 50	0. 30	·1114	2. 55	·02756	9. 0	67·0	66·7
1. 50	57. 55	1. 37	·1118		·03158	22. 0	62·7	63·0
2. 15	56. 0	2. 9	·1115	4. 21	·03077			
3. 13	55. 25	3. 14	·1126		·03123			
5. 0	52. 30	3. 37	·1123	5. 32	·03040			
6. 30	51. 0	4. 36	·1128		·03118			
6. 40	51. 40	5. 1	·1125	7. 13	·03037			
6. 49	50. 40	5. 23	·1126	10. 55	·03052			
6. 59	51. 20	5. 39	·1131	13. 49	·03137			
7. 28	51. 0	5. 56	·1127	14. 20	·03150			
8. 8	51. 35	6. 22	·1128	16. 43	·03246			
8. 16	52. 20	6. 36	·1131	17. 15	·03257			
9. 0	51. 0	6. 48	·1116	20. 3	·03367			
9. 15	52. 25	7. 11	·1124	21. 13	·03384			
11. 18	52. 25	7. 21	·1116	23. 59	·03435			
11. 48	51. 0	7. 34	·1112					
12. 53	51. 25	7. 50	·1116					
13. 8	51. 0	8. 20	·1115					
13. 24	52. 45	8. 34	·1116					
14. 12	48. 50	9. 15	·1123					
14. 45	49. 30	9. 34	·1121					
15. 7	48. 40	10. 28	·1121					
15. 45	49. 0	11. 17	·1123					
16. 8	51. 0	11. 32	·1120					
16. 15	50. 30	12. 51	·1118					
16. 40	51. 10	13. 14	·1116					
16. 56	49. 0	13. 52:	·1124					
17. 37	49. 10	14. 40	·1115					
19. 54	45. 10	15. 15	·1116					
21. 16	48. 0	16. 3	·1113					
23. 7	55. 0	16. 30	·1115					
23. 16	54. 35	16. 54	·1120					
23. 59	57. 5	17. 30	·1115					
		18. 26	·1112					
		20. 12	·1101					
		21. 0	·1091					
		22. 14	·1090					
		23. 30	·1092					
		23. 59	·1097					
Sept. 14		Sept. 14		Sept. 14		Sept. 14		
0. 0	20. 57. 10	0. 0	·1097	0. 0	·03435	9. 0	63·0	63·2
0. 45	58. 5	0. 44	·1106	1. 0	·03432	21. 0	59·9	59·9
	***	0. 49	·1105	3. 59	·03355			
2. 15	57. 20	1. 9	·1108	7. 5	·03374			
	***	1. 21	·1108	10. 25	·03432			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 14 h m	° ′ ″	Sept. 14 h m		Sept. 14 h m		h m	°	°
4. 58	20. 53. 0	1. 33	·1111	14. 37	·03624			
	***	2. 0	·1111	15. 40	·03676			
8. 57	50. 45	4. 18	·1123	15. 57	·03665			
	***	4. 44	·1120	16. 37	·03678			
9. 52	51. 0	4. 55	·1121	16. 55	·03670			
10. 7	49. 15	5. 5	·1120	17. 58	·03658			
	***	6. 10	·1121	20. 23	·03530			
10. 52	51. 25	6. 18	·1123	22. 37	·03300			
11. 51	51. 55	6. 28	·1122	23. 45	·03248			
12. 7	50. 40	7. 45	·1125	23. 59	·03233			
12. 36	50. 30	8. 57	·1124					
12. 49	51. 35	9. 24	·1129					
13. 59	50. 35	9. 46	·1127					
14. 34	47. 0	10. 10	·1129					
15. 5	49. 25	10. 31	·1127					
15. 41	59. 25	11. 28	·1128					
16. 0	56. 0	11. 36	·1127					
16. 23	54. 0	11. 52	·1132					
16. 57	48. 0	12. 5	·1128					
17. 8	47. 20	12. 21	·1125					
17. 40	48. 35	12. 35	·1128					
17. 54	47. 35	12. 48	·1128					
18. 2	48. 20	13. 4	·1132					
18. 20	47. 25	13. 23	·1131					
18. 57	47. 5	13. 50	·1134					
20. 30	20. 47. 0	14. 31	·1133					
22. 57	21. 0. 25	14. 43	·1127					
23. 49	2. 15	15. 10	·1125					
23. 59	2. 0	15. 30	·1118					
		16. 21	·1137					
		16. 37	·1139					
		17. 13	·1127					
		17. 52	·1122					
		18. 5	·1129					
		18. 15	·1126					
		18. 22	·1128					
			***					
		19. 1	·1126					
		19. 36	·1124					
		20. 55	·1109					
		21. 48:	·1099					
			***					
		22. 30	·1104					
			***					
		22. 52:	·1101					
			***					
		23. 30	·1112					
			(†)					
Sept. 15		Sept. 15		Sept. 15		Sept. 15		
0. 0	21. 2. 0		(†)	0. 0	·03233	1. 0	65·4	65·0
2. 53	20. 56. 30	0. 46	·1126	1. 47	·03010	3. 0	68·1	67·8
3. 5	58. 10		***	3. 51	·02612	9. 0	68·0	68·7
3. 14	57. 10	1. 20	·1127	5. 1	·02460	21. 0	61·1	61·8
4. 8	55. 10	1. 29	·1124	5. 9	·02503			
4. 47	55. 0		***	6. 23	·02755			
5. 31	56. 10	2. 11	·1126	7. 45	·02962			
6. 15	54. 10		***		·03080			
	***							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.15		Sept.15		Sept.15		h m	°	°
h m	° ′ ″	h m		h m				
7. 11	20. 55. 50	2. 27	·1134	9. 38	·03038			
7. 29	54. 25		***	12. 3	·03097			
	***	2. 50	·1128	18. 26	·03582			
8. 22	54. 15		***	20. 0	·03670			
9. 2	52. 15	3. 2	·1135		(†)			
9. 26	52. 50		***	21. 0	·03733*			
9. 57	51. 0	4. 0	·1123	22. 32	·03702			
10. 47	51. 10		***	23. 59	·03688			
12. 30	48. 50	4. 23	·1133					
12. 51	51. 10		***					
13. 37	49. 30	4. 41	·1125					
13. 45	50. 5		***					
14. 0	48. 50	5. 6	·1124					
14. 13	49. 10		***					
14. 27	47. 50	5. 47	·1104					
14. 45	49. 0		***					
14. 54	48. 20	7. 0	·1111					
15. 27	50. 30	7. 7	·1115					
15. 36	49. 15	7. 20	·1111					
16. 0	50. 0	7. 52	·1118					
16. 15	48. 30	8. 8	·1112					
16. 30	49. 0	8. 25	·1109					
17. 0	48. 0	8. 34	·1115					
17. 9	49. 10	8. 41	·1104					
17. 32	48. 10		***					
17. 53	48. 0	9. 20	·1114					
18. 15	48. 40		***					
	***	9. 50	·1110					
19. 28	47. 0		***					
19. 56	48. 25	11. 16	·1108					
20. 15	47. 50		***					
21. 18	49. 10	11. 40	·1112					
21. 36	51. 20		***					
21. 57	51. 15	12. 28	·1107					
	***		***					
23. 27	56. 5	13. 20	·1114					
23. 34	57. 45		***					
23. 42	56. 50	15. 12	·1114					
23. 59	57. 0		***					
		16. 38	·1127					
			***					
		18. 7	·1118					
			***					
		18. 54	·1119					
			***					
		19. 59	·1109					
			***					
		21. 7	·1105					
		22. 6	·1105					
		22. 55	·1096					
			***					
		23. 31	·1100					
		23. 43	·1106					
		23. 59	·1100					
Sept.16		Sept.16		Sept.16		Sept.16		
0. 0	20. 57. 0	0. 0	·1100	0. 0	·03688	1. 0	62·9	63·1
0. 45	58. 10	0. 30	·1112	1. 30	·03710	3. 0	64·9	64·9
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.16		Sept.16		Sept.16		Sept.16		
h m	° ′ ″	h m		h m		h m	°	°
2. 7	20. 54. 50	0. 53	·1113	2. 51	·03595	9. 0	63·5	64·4
	***	0. 55	·1116	3. 1	·03563	21. 0	57·0	57·6
3. 0	55. 10		(†)	5. 36	·03342	22. 0	57·7	58·0
3. 16	53. 50	1. 0	·1111*	6. 1	·03317	23. 0	58·6	58·5
3. 32	54. 50	1. 5	·1113	8. 6	·03260			
	***	1. 56	·1125	10. 22	·03255			
6. 41	53. 35		***	10. 28	·03272			
6. 59	54. 20	2. 50	·1132	11. 3	·03280			
	***		***		·03316			
7. 24	52. 20	3. 13	·1118	12. 57:	·03375			
	***		***	14. 45	·03566			
7. 57	53. 5	3. 22	·1126	17. 24	·03852			
8. 17	48. 20		***	17. 30	·03820			
8. 45	51. 55	4. 35	·1126	18. 27	·03736			
10. 14	51. 35		***	18. 37	·03703			
11. 15	44. 20	5. 7	·1124	18. 45	·03700			
11. 30	47. 5		***	20. 55	·03535			
11. 45	46. 55	5. 37	·1124		·03120			
12. 30	48. 55	5. 53	·1134	23. 40	·03048			
12. 38	48. 10		***	23. 49	·03058			
13. 15	49. 30	6. 18	·1123	23. 59	·03000			
14. 0	49. 0		***					
14. 10	48. 5	6. 36	·1123					
14. 18	49. 0		***					
14. 27	48. 25	6. 48	·1133					
14. 42	50. 0		***					
15. 10	48. 0	7. 19	·1121					
15. 47	51. 0		***					
16. 12	49. 10	7. 58	·1125					
16. 19	49. 50		***					
16. 37	49. 5	8. 10	·1119					
17. 28	50. 30		***					
17. 43	50. 10	8. 28	·1126					
17. 46	50. 25		***					
17. 56	49. 30	9. 5	·1125					
18. 0	50. 0	9. 38	·1131					
18. 14	47. 0	10. 4	·1128					
	***	10. 9	·1133					
18. 38	50. 50	10. 23	·1125					
18. 48	48. 0	10. 40	·1125					
19. 0	48. 5	10. 54	·1132					
19. 9	47. 15	11. 10	·1129					
19. 37	51. 35	11. 44	·1137					
19. 53	50. 10	12. 0	·1134					
20. 2	50. 30	12. 9	·1136					
20. 18	48. 30	12. 24	·1127					
20. 41	50. 30	12. 48	·1125					
20. 53	51. 35	13. 25	·1129					
21. 11	51. 30	14. 2	·1123					
21. 27	52. 25	14. 24	·1128					
22. 58	54. 45	14. 31	·1126					
23. 4	53. 45	14. 38	·1129					
23. 15	54. 45	14. 49	·1120					
23. 28	53. 10	14. 56	·1125					
23. 33	55. 0	15. 15	·1126					
23. 34	51. 20	15. 19	·1120					
23. 45	54. 0	15. 30	·1127					
23. 56	57. 0	15. 40	·1128					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.16		Sept.16						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 56. 0	15. 57	·1124					
		16. 5	·1129					
		16. 14	·1125 ***					
		16. 33	·1127 ***					
		17. 0	·1121 ***					
		18. 2	·1117 ***					
		18. 15	·1126 ***					
		18. 39	·1118 ***					
		20. 3	·1112 ***					
		20. 31	·1118 ***					
		20. 56	·1108					
		21. 15	·1106 ***					
		22. 5	·1094 ***					
		22. 49	·1114					
		22. 55	·1110					
		23. 10	·1118					
		23. 21	·1113					
		23. 39	·1118					
		23. 52	·1130					
		23. 59	·1130					
Sept.17		Sept.17		Sept.17		Sept.17		
0. 0	20. 55. 50	0. 0	·1130	0. 0	·03000	0. 0	59·4	59·0
0. 26	21. 0. 10	0. 6	·1131 ***	0. 24	·03016	1. 0	60·0	60·0
0. 45	20. 57. 45			1. 28	·02962	2. 0	61·3	61·0
0. 53	58. 20	0. 22	·1114	1. 56	·02957	3. 0	61·9	61·8
1. 0	57. 0	0. 39	·1111	2. 9	·02942	6. 0	62·9	62·9
1. 18	59. 0	0. 57	·1118	2. 19	·02946	9. 0	61·8	61·9
1. 26	58. 0	1. 8	·1109	5. 21	·02672	12. 0	59·1	60·0
1. 46	59. 45		(†)	6. 20	·02613	18. 0	54·0	55·2
2. 8	57. 25	2. 31	·1122 ***		·02937	21. 0	54·0	54·9
2. 30	51. 45			9. 27	·02877	22. 0	55·1	55·4
2. 39	52. 25 ***	3. 5	·1123 ***	11. 48	·02875	23. 0	56·3	56·3
				13. 23	·02936			
6. 3	49. 10 ***	3. 51	·1118 ***	16. 28	·03186			
				18. 54	·03435			
6. 56	49. 25	4. 13	·1124 ***	19. 33	·03426			
7. 37	45. 25			21. 43	·03232			
8. 0	45. 0 ***	5. 17	·1123 ***	22. 39	·03094			
				23. 21	·03020			
8. 28	47. 15 ***	5. 43	·1128 ***	23. 59	·03000			
9. 27	47. 40 ***	6. 35	·1123 ***					
10. 44	49. 25 ***	6. 46	·1129 ***					
11. 27	48. 15	7. 10	·1128 ***					
11. 54	50. 20							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.17		Sept.17						
h m	° ′ ″	h m		h m		h m	°	°
13. 58	20. 46. 0	7. 32	·1123					
14. 35	49. 10 ***	7. 45	·1129					
		8. 7	·1133					
16. 37	48. 55	8. 19	·1130					
17. 8	49. 30	8. 45	·1132					
17. 30	48. 0	9. 7	·1126					
17. 40	49. 0	9. 58	·1129					
17. 49	48. 25	10. 11	·1127					
18. 9	49. 20	10. 53	·1134					
19. 21	47. 20	11. 15	·1140					
19. 38	48. 35	11. 32	·1130					
20. 40	48. 25	12. 7	·1138 ***					
21. 0	50. 0							
21. 24	50. 20	13. 55	·1136 ***					
22. 5	53. 25							
22. 20	53. 0	14. 15	·1133 ***					
22. 28	54. 50							
22. 50	55. 20	15. 12	·1140 ***					
23. 34	55. 0							
23. 59	54. 50	15. 51	·1138 ***					
		17. 30	·1137					
		17. 48	·1139					
		17. 54	·1136 ***					
		18. 56	·1132					
		19. 4	·1130 ***					
		20. 30	·1123 ***					
		21. 25	·1114					
		21. 51	·1115					
		22. 15	·1109 ***					
		23. 2	·1118 (†)					
Sept.18		Sept.18		Sept.18		Sept.18		
0. 0	20. 54. 50		(†)	0. 0	·03000	0. 0	57·2	57·3
0. 14	57. 20	1. 0	·1126*	0. 32	·02962	1. 0	58·9	58·8
0. 30	55. 10	1. 25	·1127 ***		·02286	2. 0	60·3	60·0
1. 0	57. 10			2. 35	·02084	3. 0	61·7	61·1
1. 22	55. 10	1. 58	·1128		·02362	9. 0	62·2	62·0
1. 39	55. 40	2. 8	·1120 ***	4. 48	·02124	21. 0	59·7	59·7
3. 0	52. 35			6. 52	·02382			
3. 29	53. 0	2. 39	·1125 ***	8. 8	·02500			
3. 49	51. 55 ***			11. 24	·02578			
		3. 37	·1129	15. 6	·02777			
5. 42	51. 35 ***	3. 57	·1121 ***	17. 9	·02856			
				19. 32	·02917			
7. 20	52. 40	4. 26	·1126 ***	22. 0	·02938			
7. 50	49. 30			23. 25	·02875			
8. 38	51. 15	4. 45	·1125 ***	23. 59	·02833			
8. 48	50. 25							
9. 8	50. 35	5. 39	·1131 ***					
9. 35	49. 0 ***							
		5. 53	·1127 ***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 18		Sept. 18						
h m	° ′ ″	h m		h m		h m	°	°
10. 45	20. 51. 20	6. 22	·1127					
11. 14	51. 5		***					
11. 27	52. 0	6. 47	·1130					
11. 39	51. 20	7. 15	·1135					
12. 2	53. 25		***					
12. 14	52. 25	7. 22	·1135					
12. 38	52. 0		***					
12. 57	53. 0	7. 36	·1126					
14. 19	50. 10	7. 41	·1126					
15. 8	50. 20	7. 59	·1116					
15. 39	48. 40	8. 34	·1130					
16. 6	48. 20	9. 6	·1124					
16. 47	50. 50	9. 12	·1127					
18. 8	50. 35	9. 21	·1124					
18. 27	49. 30	9. 53	·1125					
18. 30	50. 25	10. 22	·1130					
19. 17	48. 10	10. 52	·1130					
19. 37	50. 40	11. 0	·1132					
19. 54	49. 0	11. 29	·1128					
21. 3	50. 0	11. 50	·1127					
	***	12. 0	·1131					
22. 36	56. 55	12. 30	·1126					
22. 52	56. 0	12. 52	·1127					
23. 12	57. 15	13. 6	·1124					
23. 37	57. 0	13. 23	·1128					
23. 59	57. 0	14. 41	·1120					
		15. 15	·1126					
		15. 43	·1125					
		16. 44	·1129					
		17. 9	·1128					
		17. 19	·1132					
		17. 39	·1134					
		18. 15	·1131					
		18. 39	·1132					
		19. 0	·1128					
		19. 24	·1135					
			***					
		19. 39	·1127					
			***					
		20. 10	·1124					
			***					
		20. 41	·1124					
			***					
		20. 50	·1117					
			***					
		21. 20	·1122					
			***					
		22. 19	·1120					
			***					
		22. 36	·1127					
			***					
		23. 41	·1119					
			***					
		23. 59	·1121					
Sept. 19		Sept. 19		Sept. 19		Sept. 19		
0. 0	20. 57. 0	0. 0	·1121	0. 0	·02833	1. 0	64·5	63·9
0. 31	57. 30	0. 25	·1124	1. 3	·02736	3. 0	66·7	66·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 19		Sept. 19		Sept. 19		Sept. 19		
h m	° ′ ″	h m		h m		h m	°	°
0. 46	20. 58. 30	0. 52	·1123	2. 58	{·02443	9. 0	65·5	67·0
1. 44	55. 10	1. 15	·1130		{·02592	21. 0	59·2	60·0
	***	1. 22	·1126	3. 25	·02640			
2. 22	57. 30	1. 30	·1119	4. 47	·02908			
2. 52	56. 0	2. 6	·1109	6. 7	·03123			
4. 3	56. 0	2. 16	·1115	6. 24	{·03142			
4. 17	56. 40	2. 30	·1115		{·03178			
4. 40	55. 50	3. 4	·1097	7. 8	{·03154			
5. 34	56. 25	3. 25	·1100		{·03220			
6. 44	53. 15	3. 54	·1110	7. 47	·03183			
7. 5	49. 20	4. 19	·1108	9. 0	{·03148			
7. 32	53. 50	4. 28	·1112		{·03257			
7. 56	48. 55	5. 1	·1106	10. 22	·03302			
8. 6	50. 30	5. 23	·1109	13. 25	·03477			
8. 22	48. 10	5. 38	·1107	16. 19	·03740			
8. 40	51. 0	5. 47	·1108	17. 2	·03776			
9. 14	46. 0	6. 22	·1100	18. 51	·03957			
	***	6. 43	·1101	19. 9	·03920			
10. 14	51. 0	6. 49	·1105	21. 31	·03738			
11. 7	51. 45	7. 11	·1097	22. 8	·03715			
11. 45	50. 30	7. 37	·1105	22. 23	{·03674			
12. 46	57. 40	7. 56	·1101		{·03496			
13. 29	52. 10	8. 30	·1116	23. 59	·03355			
14. 7	48. 0	8. 40	·1113					
14. 34	47. 30	9. 0	·1116					
15. 3	45. 0	9. 19	·1113					
15. 12	47. 55	9. 26	·1116					
15. 26	47. 15	9. 45	·1106					
15. 57	48. 10	10. 15	·1103					
16. 7	47. 35	10. 22	·1105					
16. 40	50. 30	10. 40	·1101					
16. 59	49. 30	11. 7	·1105					
17. 50	51. 0	12. 7	·1105					
	***	12. 19	·1108					
19. 40	47. 25	12. 55	·1107					
20. 26	48. 0	13. 6	·1110					
21. 31	52. 40	13. 29	·1109					
21. 55	53. 20	13. 51	·1113					
22. 45	57. 40	15. 9	·1113					
22. 53	57. 0	15. 13	·1116					
23. 12	59. 55	15. 23	·1109					
23. 27	20. 58. 25	16. 18	·1114					
23. 35	21. 0. 0	16. 36	·1112					
23. 42	20. 59. 5	17. 3	·1115					
23. 59	59. 0	17. 32	·1112					
		18. 15	·1116					
		19. 31	·1112					
		20. 21	·1111					
		21. 31	·1108					
		21. 54	·1107					
		22. 33	·1111					
		22. 38	·1108					
		22. 50	·1112					
		23. 7	·1108					
		23. 39	·1113					
		23. 59	·1108					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 20		Sept. 20		Sept. 20		Sept. 20		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 59. 0	0. 0	·1108	0. 0	·03355	1. 0	64 ·5	63 ·8
0. 15	20. 58. 0	0. 9	·1105	0. 53	·03317	3. 0	66 ·5	66 ·0
0. 19	21. 1. 15	0. 19	·1110	2. 5	·03178	9. 0	66 ·8	66 ·6
0. 25	20. 59. 0	0. 31	·1108	2. 10	·03150	21. 55	62 ·1	62 ·4
0. 53	21. 0. 45	0. 47	·1108	3. 35	·02938			
1. 8	20. 58. 40	0. 54	·1114	5. 0	·02760			
2. 1	58. 50	1. 7	·1105	6. 9	·02957			
2. 17	57. 55	1. 17	·1106	7. 13	·03124			
2. 46	57. 50	1. 37	·1104	7. 58	·03162			
3. 31	58. 40	2. 7	·1109		·03268			
	***	2. 35	·1102	10. 33	·03237			
4. 0	57. 0	3. 34	·1107	12. 7	·03262			
	***	4. 5	·1098	18. 6	·03503			
4. 41	57. 30	4. 21	·1103	23. 59	·03690			
	***	5. 1	·1095					
5. 41	53. 50	5. 35	·1096					
6. 7	54. 20	5. 44	·1099					
7. 4	52. 30	6. 21	·1095					
7. 23	53. 0	6. 53	·1096					
8. 10	51. 20	7. 18	·1103					
8. 14	52. 0	7. 50	·1094					
8. 28	49. 0	8. 13	·1102					
8. 37	50. 10	8. 22	·1099					
9. 3	48. 15	8. 32	·1102					
9. 24	49. 0	8. 48	·1098					
10. 6	44. 50	9. 7	·1105					
10. 32	45. 15	9. 36	·1105					
10. 45	44. 0	9. 45	·1110					
11. 7	52. 0	10. 1	·1108					
11. 16	53. 5	10. 36	·1089					
11. 32	50. 40	10. 43	·1095					
12. 1	52. 40	11. 7	·1089					
12. 7	51. 45	11. 36	·1103					
12. 15	52. 20	12. 1	·1101					
12. 53	51. 30	12. 21	·1104					
13. 8	52. 0	12. 50	·1100					
	***	14. 15	·1100					
14. 17	51. 0	14. 32	·1102					
	***	15. 41	·1095					
14. 57	49. 0	16. 17	·1099					
15. 48	51. 55	17. 6	·1101					
16. 1	51. 10	17. 52	·1095					
16. 14	51. 35	18. 13	·1095					
16. 45	50. 0	18. 24	·1097					
17. 3	48. 25	19. 20	·1088					
18. 4	49. 55	20. 25	·1087					
18. 18	48. 0	21. 30	·1086					
18. 42	48. 35	21. 52	·1088					
19. 28	47. 35	22. 7	·1086					
21. 30	51. 40	22. 18	·1089					
21. 46	53. 0	22. 59	·1091					
22. 4	53. 0	23. 24	·1100					
22. 27	54. 25	23. 36	·1101					
22. 32	54. 0	23. 59	·1098					
23. 14	55. 35							
23. 37	57. 40							
23. 59	57. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 21		Sept. 21		Sept. 21		Sept. 21		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 57. 10	0. 0	·1098	0. 0	·03690	9. 0	62 ·2	63 ·0
0. 30	58. 20	0. 33	·1110	2. 45	·03754	21. 0	58 ·0	58 ·5
1. 3	57. 10	0. 45	·1107	4. 0	·03757			
1. 44	57. 20	1. 4	·1107	6. 42	·03678			
3. 54	52. 5	1. 29	·1109	8. 2	·03662			
4. 26	52. 30	1. 37	·1113	11. 7	·03680			
4. 48	51. 30	1. 59	·1113	11. 45	·03684			
4. 57	51. 35	2. 8	·1110	19. 22	·03974			
6. 0	50. 15	2. 23	·1112	21. 49	·03815			
6. 22	50. 15	2. 31	·1103	23. 17	·03792			
6. 41	48. 35		***		(†)			
7. 14	49. 15	3. 16	·1098					
8. 31	48. 10	3. 51	·1103					
8. 45	49. 25	4. 7	·1098					
9. 2	47. 50	4. 25	·1102					
9. 15	48. 10	4. 52	·1100					
9. 36	47. 5	5. 10	·1097					
9. 56	48. 30	5. 24	·1104					
10. 28	48. 0	5. 47	·1100					
10. 44	48. 40	5. 55	·1102					
10. 52	51. 0	6. 34	·1100					
11. 4	49. 20	6. 56	·1108					
11. 15	53. 0	7. 13	·1104					
11. 48	52. 30	7. 34	·1105					
12. 3	53. 10	7. 48	·1102					
13. 13	51. 30	8. 7	·1102					
13. 27	51. 55	8. 36	·1106					
13. 37	50. 40	9. 18	·1101					
13. 57	51. 0	10. 3	·1111					
14. 10	49. 50	10. 11	·1107					
14. 30	51. 5	10. 40	·1102					
14. 45	50. 40	10. 45	·1107					
15. 30	52. 0	10. 51	·1105					
16. 9	52. 10	11. 18	·1113					
16. 32	51. 45	11. 36	·1106					
17. 0	49. 35	11. 53	·1111					
17. 11	50. 0	12. 4	·1108					
17. 49	48. 25	12. 37	·1111					
18. 31	49. 20	13. 0	·1108					
18. 45	48. 20	13. 44	·1106					
19. 7	49. 0	14. 15	·1107					
19. 22	48. 20	14. 31	·1103					
19. 40	49. 10	15. 6	·1104					
20. 7	49. 0	15. 49	·1103					
20. 25	48. 0	16. 15	·1107					
	***	16. 59	·1110					
21. 24	49. 35		***					
22. 11	51. 0	17. 28	·1109					
22. 22	52. 25	17. 51	·1108					
22. 52	53. 50		***					
22. 59	55. 20	18. 46	·1101					
23. 24	57. 0	19. 8	·1107					
23. 39	56. 0	19. 34	·1105					
23. 59	56. 40		***					
		20. 22	·1096					
			***					
		21. 43	·1097					
		22. 15	·1087					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Sept. 21 h m		h m		h m	°	°
		22. 30	·1092					
		22. 43	·1090					
		23. 5	·1096					
		23. 14	·1095					
		23. 50	·1094					
			(†)					
Sept. 22		Sept. 22		Sept. 22		Sept. 22		
0. 0	20. 56. 45		(†)		(†)	1. 0	60 ·0	59 ·9
0. 17	57. 0	0. 3	·1099	0. 28	·03442	3. 0	61 ·0	60 ·8
2. 15	58. 0	0. 50	·1109	2. 13	·03377	9. 0	61 ·5	61 ·7
2. 32	56. 0	1. 40	·1099	7. 22	·03158	21. 0	53 ·5	54 ·5
3. 56	52. 30	2. 0	·1101	10. 51	·03130			
4. 48	52. 5	2. 28	·1110	13. 4	·03176			
5. 12	52. 30	2. 46	·1098	15. 20	·03255			
5. 33	51. 5		***	17. 37	·03408			
7. 7	51. 40	3. 57	·1104	19. 46	·03618			
7. 32	48. 15	4. 26	·1104	20. 13	·03693			
8. 3	50. 45		***	21. 59	·03440			
8. 26	51. 0	5. 40	·1103	23. 9	·03352			
9. 0	47. 25	5. 52	·1107	23. 59	·03322			
	***	6. 5	·1106					
10. 35	51. 20		***					
	***	7. 3	·1109					
12. 22	51. 10	7. 24	·1103					
12. 31	53. 50	7. 48	·1113					
13. 7	51. 5	8. 10	·1105					
13. 33	53. 15		***					
14. 9	50. 15	8. 55	·1116					
14. 40	52. 10		***					
14. 50	51. 50	10. 55	·1110					
15. 28	52. 25	13. 38	·1119					
15. 41	53. 30	14. 9	·1110					
17. 13	49. 45	14. 37	·1116					
17. 35	50. 0	15. 11	·1112					
17. 48	49. 0	15. 20	·1114					
	***	15. 28	·1110					
20. 2	44. 30	16. 0	·1115					
21. 28	50. 30		***					
	***	17. 25	·1117					
21. 46	51. 15	19. 4	·1103					
23. 19	59. 20	19. 12	·1099					
23. 39	58. 30	19. 20	·1101					
23. 59	58. 50	19. 51	·1099					
		20. 30	·1087					
		20. 53	·1087					
		21. 5	·1083					
		21. 23	·1082					
		21. 55	·1088					
			***					
		22. 15	·1085					
			***					
		22. 48	·1088					
		23. 0:	·1083					
		23. 45	·1097					
		23. 59	·1096					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 23 h m	° ′ ″	Sept. 23 h m		Sept. 23 h m		Sept. 23 h m	°	°
0. 0	20. 58. 40	0. 0	·1097	0. 0	·03322	1. 0	58 ·0	57 ·8
0. 26	59. 30	0. 12	·1099	1. 43	·03260	3. 0	60 ·0	60 ·0
0. 45	59. 0	1. 8	·1101	2. 15	·03224	9. 0	62 ·0	61 ·9
1. 0	58. 30	1. 40	·1109	2. 21	·03230	21. 0	56 ·0	57 ·0
1. 17	58. 45	2. 30	·1107	2. 27	·03203	22. 0	57 ·4	57 ·7
2. 38	57. 0	3. 29	·1129	4. 10	·03030	23. 0	58 ·5	58 ·2
2. 45	58. 30	3. 53	·1112	4. 34	·03015			
3. 5	57. 10	4. 13	·1115	5. 21	·02923			
3. 26	59. 10	4. 42	·1112	6. 35	·02822			
3. 40	57. 0	5. 3	·1136	7. 40	·02755			
4. 4	56. 50	5. 24	·1127	7. 53	·02854			
4. 30	55. 20	5. 35	·1114	8. 3	·02736			
4. 50	57. 0	6. 10	·1106	10. 7	·02692			
5. 11	56. 35	6. 27	·1107	12. 27	·02690			
5. 16	57. 10	6. 47	·1117	14. 0	·02733			
5. 26	56. 55	6. 58	·1117	14. 18	·02734			
5. 33	57. 0	7. 7	·1122	18. 5	·02932			
5. 44	55. 10	7. 29	·1110	20. 6	·03054			
5. 56	55. 10	7. 42	·1118	22. 14	·03138			
6. 30	52. 20	7. 51	·1116	22. 50	·03123			
6. 59	51. 50	8. 5	·1100		·02555			
7. 30	51. 50	8. 24	·1114	23. 59	·02723			
7. 47	45. 0	8. 44	·1114					
7. 57	47. 50	8. 53	·1116					
8. 15	44. 0	9. 3	·1115					
8. 45	49. 0	9. 10	·1106					
9. 10	49. 10	9. 16	·1112					
9. 38	50. 55	10. 2	·1115					
10. 30	50. 5	10. 19	·1112					
11. 7	50. 30	10. 35	·1113					
11. 24	49. 30	11. 9	·1120					
11. 45	44. 40	11. 26	·1120					
12. 8	45. 0	11. 50	·1133					
13. 7	49. 20	12. 15	·1125					
13. 23	49. 30	12. 37	·1114					
13. 52	52. 45	13. 53	·1118					
14. 12	50. 40	14. 7	·1126					
14. 48	50. 10	14. 42	·1119					
15. 0	49. 30	14. 52	·1121					
15. 16	50. 10	15. 4	·1119					
16. 16	50. 10	15. 53	·1121					
16. 53	52. 45	16. 39	·1118					
17. 38	52. 15	17. 7	·1122					
17. 52	51. 0	18. 18	·1113					
18. 14	51. 0	18. 37	·1116					
18. 34	52. 10	19. 15	·1107					
19. 34	48. 0	20. 11	·1094					
20. 3	48. 20	20. 22	·1097					
20. 14	47. 10	20. 43	·1094					
20. 25	48. 30	21. 0	·1094					
20. 47	48. 0	21. 15	·1091					
20. 55	48. 10	22. 0	·1090					
21. 4	47. 45	22. 46	·1094					
22. 45	54. 0	23. 0	·1088					
23. 0	56. 50	23. 15	·1091					
23. 45	56. 55	23. 53	·1109					
23. 54	58. 0	23. 59	·1106					
23. 59	57. 5							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.24		Sept.24		Sept.24		Sept.24		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 57. 5	0. 0	·1106		(†)	0. 0	59·2	59·0
0. 15	57. 10	0. 5	·1102	1. 0	·02697*	1. 0	60·5	60·0
0. 30	55. 25	0. 19	·1106	1. 25	·02692	2. 0	61·5	61·0
0. 34	56. 10	0. 30	·1099	2. 17	·02642	3. 0	62·5	62·0
0. 45	58. 0	0. 44	·1106	2. 28	·02664	6. 0	64·4	63·6
1. 14	53. 0	0. 48	·1116	2. 37	·02638	9. 0	64·6	64·0
1. 52	57. 0	1. 0	·1100	2. 58	·02658	12. 0	64·1	64·0
2. 33	52. 35	1. 8	·1097	3. 13	·02702	18. 0	63·2	63·2
2. 40	58. 0	1. 58	·1119	3. 21	·02686	21. 0	63·0	64·0
2. 52	20. 56. 5	2. 1	·1114	3. 33	·02717	22. 0	63·5	64·0
3. 17	21. 1. 20	2. 13	·1112	3. 45	·02712	23. 0	64·1	64·0
3. 32	20. 58. 20	2. 35	·1102	4. 0	·02900			
3. 41	21. 1. 5	2. 41	·1134	4. 7	·02722			
3. 49	20. 58. 35	2. 52	·1106	4. 37	·02695			
4. 1	21. 3. 0	3. 2	·1122	4. 55	·02720			
	***	3. 7	·1112	5. 9	·02815			
4. 15	20. 48. 15	3. 26	·1132	5. 20	·02756			
4. 20	54. 0	3. 33	·1125	5. 44	·02735			
4. 27	54. 40	3. 41	·1143	5. 52	·02680			
4. 40	48. 25	3. 49	·1129	6. 1	·02717			
4. 48	50. 30	3. 52	·1132	6. 7	·02696			
4. 57	45. 30	3. 56	·1124	6. 10	·02717			
5. 12	53. 30	4. 3	·1147	6. 15	·02696			
5. 20	38. 0	4. 5	·1145	6. 26	·02752			
5. 36	51. 20	4. 14	·1152	6. 39	·02648			
5. 47	37. 35	4. 17	·1137	6. 51	·02574			
6. 9	53. 35	4. 18	·1140	7. 13	·02482			
6. 15	46. 10	4. 35	·1087	7. 24	·02496			
6. 28	52. 45	4. 44	·1100	7. 49	·02410			
6. 30	45. 0	4. 53	·1092	8. 8	·02398			
6. 38	39. 35	5. 4	·1112	8. 34	·02366			
6. 45	40. 25	5. 19	·1087	9. 0	·02360			
6. 49	39. 45	5. 25	·1108		·02727			
7. 7	45. 35	5. 33	·1110	11. 39	·02650			
7. 27	42. 15	5. 39	·1094	11. 55	·02657			
7. 36	36. 0	5. 48	·1102	12. 32	·02566			
7. 51	43. 10	5. 59	·1084	12. 55	·02584			
8. 4	41. 50	6. 3	·1086	13. 23	·02577			
8. 27	47. 45	6. 8	·1058	14. 29	·02616			
8. 31	47. 30	6. 20	·1086	18. 5	·02679			
8. 47	49. 0	6. 23	·1057	22. 8	·02704			
9. 8	48. 25	6. 27	·1060	23. 7	·02694			
9. 20	49. 20	6. 29	·1050		(†)			
	***	6. 57	·1070					
10. 53	49. 55	7. 5	·1071					
	***	7. 11	·1061					
11. 55	48. 35	7. 16	·1062					
12. 22	56. 0	7. 20	·1056					
12. 44	53. 10	7. 34	·1079					
13. 4	56. 0	7. 50	·1059					
13. 50	49. 40	8. 0	·1070					
14. 28	49. 10	8. 21	·1073					
14. 45	50. 0	8. 39	·1068					
17. 2	47. 30	8. 45	·1070					
17. 50	48. 10	8. 53	·1071					
18. 3	49. 30	9. 28	·1073					
18. 19	48. 10	9. 35	·1071					
18. 48	50. 50	9. 49	·1074					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.24		Sept.24						
h m	° ′ ″	h m		h m		h m	°	°
19. 33	20. 48. 30	9. 59	·1078					
19. 38	49. 25	10. 37	·1082					
19. 45	48. 25	10. 53	·1079					
20. 7	49. 30	11. 11	·1079					
20. 16	51. 15	11. 40	·1107					
20. 32	50. 0	12. 16	·1077					
20. 48	50. 0	13. 30	·1085					
21. 28	50. 10	13. 41	·1084					
22. 7	50. 50	14. 1	·1087					
22. 23	56. 10	14. 24	·1085					
22. 38	55. 10	15. 37	·1087					
22. 43	56. 0	16. 7	·1090					
23. 3	53. 45	16. 30	·1088					
23. 59	53. 30	17. 3	·1081					
		17. 14	·1081					
		17. 33	·1075					
		17. 48	·1078					
		18. 0	·1077					
		18. 22	·1065					
		18. 43	·1062					
		18. 53	·1078					
		18. 58	·1072					
			(†)					
		21. 0	·1080*					
Sept.25		Sept.25		Sept.25		Sept.25		
0. 0	20. 53. 30		(†)		(†)	0. 0	64·4	64·2
0. 27	54. 0	0. 15	·1246	0. 50	·03000	1. 0	64·9	64·9
0. 44	57. 0	0. 39	·1253	2. 6	·03023	2. 0	65·6	65·2
1. 8	57. 15	0. 56	·1246		·02973	3. 0	66·1	66·0
1. 31	56. 0	1. 22	·1242	3. 2	·02960	9. 0	67·0	66·4
1. 42	56. 10	1. 54	·1224	4. 49	·02847	21. 0	62·0	62·0
2. 0	53. 15	2. 1	·1228	5. 0	·02850			
2. 12	53. 50	2. 25	·1234	5. 24	·02803			
2. 30	51. 45	2. 41	·1249	5. 54	·02805			
4. 3	53. 30	2. 57	·1239	6. 21	·02846			
4. 19	52. 20	3. 54	·1265	6. 58	·02860			
4. 36	52. 15	4. 14	·1265	7. 8	·02857			
4. 58	48. 15	4. 38	·1241	9. 18	·02942			
5. 12	49. 0	5. 0	·1256		·03685			
5. 41	47. 25	5. 15	·1250	11. 25	·03664			
6. 0	41. 50	5. 25	·1260	14. 10	·03740			
6. 8	41. 10	5. 36	·1257	16. 4	·03925			
6. 18	43. 30	5. 41	·1252	16. 47	·03946			
6. 27	43. 0	5. 46	·1252	17. 0	·03975			
6. 43	46. 40	6. 6	·1273	17. 44	·03958			
6. 58	43. 10	6. 20	·1266	19. 0	·04036			
7. 13	47. 25	6. 25	·1267		·03957			
8. 3	48. 40	6. 39	·1258	19. 29	·03958			
8. 13	49. 30	6. 54	·1273		·03740			
9. 12	47. 0	7. 8	·1263	21. 31	·03823			
9. 37	47. 20	7. 17	·1264		·03750			
9. 57	50. 40	7. 25	·1259	23. 14	·03737			
10. 23	46. 55	7. 41	·1251	23. 59	·03750			
10. 33	47. 50	8. 3	·1263					
10. 44	47. 25	8. 29	·1258					
10. 57	50. 0	8. 48	·1265					
11. 24	50. 45	9. 18	·1267					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 25. A sudden change took place in the position of the Horizontal Force Magnet at the time of changing the photographic sheets, causing the readings in the series beginning September 25 to be about 0·016 greater than those in the series ending September 24.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 25		Sept. 25						
h m	° ′ ″	h m		h m		h m	°	°
11. 47	20. 49. 40	9. 37	·1280					
12. 9	50. 25	10. 3	·1266					
12. 53	49. 5	10. 32	·1282					
13. 16	47. 0	10. 39	·1288					
13. 53	49. 0	10. 49	·1278					
14. 2	48. 30	10. 54	·1277					
14. 18	50. 0	11. 3	·1267					
14. 45	49. 15	11. 36	·1262					
14. 53	50. 0	11. 52	·1273					
15. 11	47. 35	12. 8	·1277					
15. 48	46. 50	12. 23	·1269					
16. 0	48. 0	12. 40	·1268					
16. 12	47. 10	13. 4	·1260					
16. 42	50. 5	13. 39	·1274					
17. 0	56. 45	14. 17	·1263					
17. 12	55. 20	14. 25	·1266					
17. 23	55. 50	14. 32	·1263					
17. 33	58. 0	14. 40	·1275					
17. 57	55. 15	14. 50	·1272					
18. 4	56. 0	14. 54	·1274					
18. 14	53. 30	15. 4	·1274					
18. 27	51. 30	15. 23	·1267					
18. 30	53. 10	15. 33	·1269					
18. 38	49. 0	16. 3	·1268					
18. 45	49. 55	16. 39	·1260					
18. 57	48. 10	16. 46	·1264					
19. 5	50. 0	17. 0	·1293					
19. 30	47. 40	17. 10	·1290					
19. 51	47. 40	17. 22	·1298					
20. 3	45. 35	17. 35	·1288					
20. 6	47. 0	17. 40	·1291					
20. 24	46. 0	17. 47	·1287					
20. 33	47. 30	17. 59	·1296					
20. 36	46. 0	18. 30	·1274					
20. 40	48. 25	18. 45	·1269					
20. 48	47. 30	18. 55	·1275					
21. 0	47. 0	19. 0	·1268					
21. 40	53. 30	19. 8	·1273					
21. 48	56. 0	19. 15	·1265					
21. 55	54. 50	19. 38	·1263					
22. 0	20. 56. 20	20. 19	·1240					
	***	20. 30	·1242					
23. 0	21. 1. 25	20. 37	·1236					
23. 36	20. 59. 20	20. 52	·1237					
23. 44	21. 0. 0	21. 25	·1226					
23. 52	20. 58. 45	21. 31	·1226					
23. 59	59. 40	21. 38	·1231					
		21. 52	·1218					
		21. 54	·1226					
		22. 15	·1224					
		22. 45	·1217					
		22. 59	·1223					
		23. 15	·1219					
		23. 21	·1223					
		23. 39	·1225					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 26		Sept. 26		Sept. 26		Sept. 26		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 59. 30		(†)	0. 0	·03750	1. 0	65 ·6	65 ·0
0. 44	57. 0	0. 58	·1277	0. 30	·03732	3. 0	67 ·4	64 ·9
1. 0	58. 30	1. 5	·1282		·03538	9. 0	68 ·0	67 ·6
1. 31	57. 50	2. 15	·1226	2. 36	·03426	21. 0	63 ·0	63 ·5
1. 38	58. 25	2. 37	·1256		·03300			
2. 11	53. 0	3. 3	·1250	4. 8	·03160			
2. 30	53. 35	3. 21	·1253	4. 39	·03148			
2. 49	52. 40	3. 53	·1262	5. 47	·03070			
3. 39	54. 20	4. 28	·1236	6. 36	·03112			
4. 10	53. 20	4. 35	·1234		·03248			
4. 45	41. 15	5. 7	·1263	7. 56	·03200			
4. 51	42. 10	5. 30	·1256	8. 20	·03161			
5. 0	42. 30	5. 40	·1259	9. 24	·03180			
5. 16	45. 0	5. 49	·1254	9. 38	·03158			
5. 44	46. 50	5. 56	·1259	10. 32	·03147			
5. 53	48. 20	6. 25	·1242	12. 50	·03216			
6. 0	47. 50	6. 38	·1243	12. 56	·03205			
6. 12	48. 30	6. 53	·1271	13. 35	·03240			
6. 29	44. 20	7. 12	·1258	14. 9	·03240			
6. 44	38. 0	7. 21	·1262	14. 38	·03280			
7. 0	44. 45	8. 0	·1241	17. 43	·03484			
7. 13	43. 35	8. 11	·1266	20. 5	·03598			
7. 34	47. 35	8. 22	·1262	22. 21	·03633			
	***	8. 44	·1246	23. 42	·03620			
7. 54	49. 0	8. 53	·1252		(†)			
8. 0	48. 50	9. 43	·1254					
8. 10	52. 10	9. 51	·1249					
8. 23	53. 10	10. 6	·1270					
8. 46	48. 40	10. 15	·1267					
8. 57	49. 40	10. 23	·1270					
8. 59	47. 20	10. 39	·1258					
9. 0	49. 50	10. 49	·1261					
9. 25	53. 10	11. 10	·1249					
9. 44	52. 35	11. 30	·1245					
10. 0	47. 30	11. 47	·1254					
10. 33	52. 0	11. 57	·1251					
10. 46	51. 0	12. 37	·1257					
11. 0	52. 15	12. 46	·1253					
11. 46	49. 0	12. 53	·1257					
11. 53	49. 0	13. 7	·1250					
12. 20	46. 10	13. 18	·1253					
12. 41	53. 35	13. 33	·1247					
13. 8	51. 0	13. 42	·1251					
13. 30	56. 15	13. 56	·1247					
14. 1	53. 20	14. 9	·1250					
14. 9	53. 25	14. 21	·1248					
14. 55	51. 0	15. 9	·1264					
15. 3	51. 30	15. 22	·1257					
15. 50	49. 30	17. 15	·1255					
16. 36	49. 30	17. 38	·1259					
18. 3	48. 0	17. 46	·1257					
	***	18. 45	·1251					
19. 14	45. 30	18. 50	·1252					
	***	19. 21	·1247					
19. 45	46. 25	19. 51	·1243					
19. 53	45. 0	20. 25	·1240					
20. 0	45. 50	21. 12	·1228					
20. 11	44. 35	22. 21	·1219					
	***							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁚ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.26		Sept.26						
h m	° ′ ″	h m		h m		h m	°	°
20. 34	20. 47. 25	22. 44	·1229					
20. 46	46. 50	23. 8	·1222					
21. 0	48. 20	23. 21	·1240					
21. 28	50. 30		***					
21. 38	49. 30	23. 59	·1243					
22. 14	51. 30							
	***							
22. 45	53. 50							
22. 53	55. 15							
23. 7	52. 50							
23. 10	54. 15							
23. 23	52. 10							
23. 39	54. 0							
23. 45	53. 20							
23. 49	54. 15							
23. 59	55. 0							
Sept.27		Sept.27		Sept.27		Sept.27		
0. 0	20. 55. 0	0. 0	·1243		(†)	1. 0	66 ·2	65 ·9
0. 7	56. 0	0. 17	·1244	1. 0	·03646*	3. 0	67 ·4	67 ·0
0. 21	54. 0		(†)	3. 0	·03594*	9. 0	67 ·1	66 ·9
	(†)	1. 0	·1250*	5. 24	·03415	21. 0	64 ·6	64 ·7
1. 0	56. 40*	3. 0	·1253*	7. 2	·03350			
3. 0	53. 16*	9. 0	·1286*	9. 37	·03316			
9. 0	38. 56*	21. 0	·1242*	11. 55	·03250			
21. 0	48. 40*			14. 53	·03332			
	(†)			17. 8	·03368			
22. 43	54. 0			20. 48	·03546			
23. 38	55. 45			23. 39	·03647			
23. 59	55. 45			23. 59	·03646			
Sept.28		Sept.28		Sept.28		Sept.28		
0. 0	20. 55. 40		(†)	0. 0	·03646	8. 30	67 ·9	67 ·8
2. 4	52. 0	2. 48	·1249	2. 4	·03640	21. 0	64 ·8	65 ·0
3. 0	51. 30	3. 45	·1252	3. 26	·03614			
4. 3	48. 5	4. 39	·1247	4. 23	·03526			
5. 29	48. 40	5. 31	·1249	7. 49	·03368			
6. 22	50. 0	6. 36	·1254	12. 21	·03322			
6. 53	50. 0	7. 36	·1254	14. 41	·03306			
7. 42	49. 0	8. 0	·1248	14. 48	·03364			
8. 12	50. 50	10. 22	·1251	18. 6	·03478			
8. 49	48. 10	10. 35	·1249	21. 28	·03547			
9. 5	48. 50	10. 55	·1254	23. 59	·03565			
9. 24	47. 20	11. 15	·1251					
9. 55	48. 0	11. 31	·1253					
10. 34	46. 10	12. 5	·1250					
11. 4	47. 10	12. 28	·1266					
11. 35	48. 0	12. 52	·1253					
12. 22	51. 45	17. 3	·1260					
12. 45	49. 0	17. 43	·1262					
13. 10	50. 20	19. 3	·1254					
13. 21	50. 0	19. 37	·1253					
14. 12	51. 35	20. 15	·1246					
14. 16	52. 40	21. 36	·1237					
14. 56	49. 15	21. 48	·1239					
15. 26	49. 30	23. 34	·1241					
15. 41	50. 15		(†)					
16. 44	49. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.28								
h m	° ′ ″	h m		h m		h m	°	°
17. 4	20. 50. 20							
17. 53	49. 10							
18. 39	49. 10							
19. 14	49. 30							
20. 6	48. 0							
20. 42	48. 10							
20. 59	49. 5							
21. 30	49. 10							
22. 3	51. 20							
22. 43	51. 50							
23. 59	53. 25							
Sept.29		Sept.29		Sept.29		Sept.29		
0. 0	20. 53. 25		(†)	0. 0	·03565	1. 0	66 ·9	66 ·7
0. 30	54. 0	0. 47	·1245	2. 8	·03553	3. 0	67 ·0	67 ·2
0. 44	53. 15	1. 36	·1249	6. 33	·03398	9. 0	66 ·8	67 ·0
0. 56	53. 25	1. 40	·1247	9. 0	·03392	21. 0	63 ·0	64 ·0
1. 29	54. 10	2. 3	·1256	11. 55	·03430			
1. 53	52. 45	2. 22	·1254	12. 8	·03407			
3. 9	50. 20	3. 15	·1253	14. 43	·03468			
3. 36	47. 50	3. 30	·1248	17. 32	·03692			
4. 23	47. 0	5. 14	·1257	21. 20	·03916			
4. 49	47. 30	5. 54	·1259	22. 44	·03905			
4. 58	47. 5	6. 16	·1255		·03703			
5. 55	48. 15	6. 42	·1262	23. 22	·03702			
6. 18	46. 0	8. 38	·1260		(†)			
7. 44	50. 0	9. 18	·1262					
8. 2	50. 10	9. 59	·1258					
8. 25	51. 0	10. 37	·1262					
8. 45	50. 50	10. 59	·1259					
9. 20	52. 45	11. 15	·1263					
10. 17	52. 25	11. 29	·1260					
11. 1	54. 15	11. 42	·1266					
11. 32	54. 50	11. 52	·1262					
11. 45	58. 15	13. 26	·1258					
12. 7	53. 20	14. 21	·1255					
12. 55	51. 40	16. 2	·1256					
13. 58	53. 15	16. 26	·1254					
14. 25	53. 0	16. 43	·1255					
14. 34	52. 25	17. 16	·1254					
16. 26	55. 10	17. 48	·1256					
17. 12	55. 0	19. 45	·1249					
19. 50	46. 55	19. 57	·1243					
20. 57	47. 50	20. 27	·1246					
21. 26	49. 0	20. 32	·1243					
21. 49	48. 30	21. 0	·1241					
22. 12	49. 30	23. 13	·1242					
23. 3	54. 10	23. 59	·1245					
23. 14	53. 30							
23. 59	53. 40							
Sept.30		Sept.30		Sept.30		Sept.30		
0. 0	20. 53. 40	0. 0	·1245	1. 0	·03720*	1. 0	65 ·9	64 ·9
0. 29	52. 30	0. 17	·1242	3. 0	·03041*	3. 0	67 ·0	66 ·1
0. 56	52. 50	1. 15	·1249	9. 0	·02834*	9. 0	64 ·2	64 ·8
1. 30	51. 0	1. 32	·1247	21. 0	·03325*	21. 0	54 ·6	55 ·2
1. 38	51. 0	2. 18	·1254			22. 0	55 ·0	55 ·5
1. 50	50. 20	2. 33	·1250			23. 0	55 ·8	56 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 27. The Photographic Traces for the Declination and Horizontal Force Magnets were too faint for use.

September 30. The time-piece giving motion to the Vertical Force Cylinder was away for repair.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 30		Sept. 30						
h m	° ′ ″	h m		h m		h m	°	°
3. 0	20. 49. 5	2. 40	·1252					
3. 15	50. 0	2. 53	·1249					
4. 16	50. 0	3. 37	·1258					
	***	4. 25	·1255					
4. 24	49. 40	4. 54	·1256					
4. 48	50. 10	5. 6	·1252					
	***	5. 54	·1260					
5. 3	49. 30	7. 37	·1262					
5. 30	51. 0	7. 48	·1264					
	***	8. 0	·1262					
6. 33	51. 30	8. 10	·1264					
6. 45	51. 0	8. 32	·1261					
	***	8. 48	·1261					
9. 27	48. 15	10. 7	·1267					
10. 18	50. 20	11. 33	·1271					
11. 7	50. 35	11. 52	·1281					
11. 48	52. 55	12. 16	·1268					
12. 25	46. 55	13. 15	·1265					
12. 33	46. 15	14. 17	·1265					
	***	15. 9	·1268					
13. 13	48. 10	15. 24	·1273					
	***	16. 41	·1271					
13. 59	47. 25	17. 17	·1274					
14. 27	48. 25	17. 46	·1272					
14. 49	47. 0	18. 11	·1280					
15. 7	47. 20	19. 4	·1271					
15. 33	46. 5	19. 29	·1275					
15. 45	48. 0	20. 17	·1270					
16. 7	46. 20	20. 37	·1262					
16. 20	47. 15	20. 45	·1262					
16. 26	46. 50	21. 11	·1258					
16. 38	48. 0	22. 6	·1259					
16. 52	47. 20	22. 52	·1257					
17. 10	48. 30	23. 27	·1261					
17. 22	48. 25	23. 45	·1256					
18. 1	51. 20	23. 59	·1256					
20. 8	44. 50							
20. 37	47. 25							
20. 54	47. 40							
	***							
21. 45	53. 45							
	***							
22. 30	54. 55							
23. 26	54. 20							
23. 41	53. 50							
23. 59	54. 5							
Oct. 1		Oct. 1		Oct. 1		Oct. 1		
0. 0	20. 54. 5	0. 0	·1256	1. 0	·02992*	0. 0	56 ·6	56 ·5
0. 30	54. 15	0. 30	·1259	3. 0	·02810*	1. 0	57 ·7	57 ·2
1. 25	53. 0	0. 45	·1255	9. 33	·02557*	2. 0	58 ·5	57 ·9
1. 41	54. 25		(†)	21. 0	·02850*	3. 0	59 ·4	58 ·9
2. 30	51. 0	1. 0	·1257*			6. 0	60 ·6	59 ·8
2. 36	51. 10	3. 0	·1260*			9. 33	59 ·0	58 ·4
3. 36	49. 50	4. 13	·1262			12. 0	58 ·0	57 ·5
4. 28	51. 0	5. 17	·1264			18. 0	59 ·0	58 ·0
4. 58	50. 0	5. 45	·1252			21. 0	59 ·9	58 ·6
5. 7	50. 10	6. 36	·1262			22. 0	60 ·5	59 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 1		Oct. 1				Oct. 1		
h m	° ′ ″	h m		h m		h m	°	°
5. 42	20. 47. 50	7. 34	·1260			23. 0	61 ·0	60 ·5
7. 46	52. 10	7. 48	·1266					
8. 15	48. 10	8. 8	·1249					
	***	8. 22	·1253					
9. 0	48. 20	8. 49	·1250					
	***	9. 4	·1255					
9. 51	46. 55	9. 38	·1254					
10. 10	48. 35	10. 8	·1261					
10. 26	48. 25	10. 34	·1250					
10. 49	50. 40	10. 51	·1256					
11. 30	49. 0	11. 34	·1254					
12. 8	51. 40	11. 53	·1251					
12. 49	51. 35	12. 36	·1251					
13. 3	56. 55		***					
13. 29	50. 0	12. 48	·1254					
13. 57	47. 10	13. 8	·1250					
14. 28	47. 0	13. 20	·1263					
14. 51	48. 5	13. 31	·1266					
15. 45	48. 35	13. 59	·1240					
16. 22	48. 0		***					
16. 35	48. 35	14. 40	·1244					
16. 52	48. 30	14. 55	·1239					
16. 59	49. 0		***					
17. 22	53. 0	16. 5	·1246					
18. 15	49. 25		***					
18. 34	49. 5	17. 0	·1249					
18. 55	47. 30	17. 22	·1243					
19. 38	47. 25	18. 27	·1248					
20. 5	46. 15	19. 8	·1242					
20. 45	47. 30	20. 7	·1237					
21. 10	50. 0	20. 51	·1228					
21. 48	50. 10	21. 0	·1223					
23. 23	53. 30	21. 52	·1224					
23. 59	53. 45	22. 19	·1222					
		23. 12	·1228					
		23. 38	·1225					
		23. 50	·1226					
			(†)					
Oct. 2		Oct. 2		Oct. 2		Oct. 2		
0. 0	20. 53. 30		(†)		(†)	0. 0	61 ·5	60 ·8
0. 20	53. 20	0. 5	·1228	1. 0	·02784*	1. 0	62 ·0	60 ·8
1. 15	54. 50	0. 23	·1228	2. 49	·02732	2. 0	62 ·7	61 ·5
1. 57	52. 30	1. 0	·1235	5. 33	·02600	3. 0	63 ·3	61 ·9
2. 12	52. 10	1. 31	·1231	7. 11	·02468	9. 0	65 ·1	64 ·6
2. 17	52. 35	1. 51	·1229	9. 39	·02364	21. 0	64 ·5	64 ·0
	***	2. 15	·1233	10. 1	·02340			
5. 5	47. 15	2. 33	·1228	12. 34	·02287			
5. 40	49. 0	2. 54	·1228	13. 8	·02293			
8. 37	49. 30	3. 18	·1232	13. 37	·02282			
9. 18	48. 0	3. 47	·1226	16. 2	·02313			
9. 34	44. 15	4. 28	·1231	16. 57	·02302			
10. 3	49. 10	5. 1	·1220	19. 4	·02350			
10. 50	46. 50	5. 31	·1227	21. 3	·02346			
10. 58	47. 15	5. 50	·1227		(†)			
11. 26	45. 10	6. 15	·1232					
11. 43	44. 45	7. 43	·1232					
12. 8	45. 30	8. 27	·1234					
	***							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

September 30, and October 1. The time-piece giving motion to the Vertical Force Cylinder was away for repair.

Greenwich Mean Solar Time.	Western Declination.
Oct. 2	
h m	° ′ ″
13. 11	20. 43. 55
13. 28	44. 25
13. 47	40. 45
14. 21	46. 10
14. 50	43. 50
15. 15	48. 30
15. 42	51. 10
16. 0	50. 30
16. 22	54. 30
17. 26	49. 10
18. 7	49. 30
18. 46	47. 50
19. 1	48. 25
19. 52	48. 20
20. 20	49. 0
21. 8	51. 35
21. 48	52. 45
22. 36	53. 30
	***
23. 34	56. 30
23. 50	56. 40
23. 59	56. 55
Oct. 3	
0. 0	20. 56. 55
0. 20	57. 10
0. 33	57. 35
1. 1	56. 55
1. 12	57. 0
1. 36	56. 25
1. 54	56. 35
3. 30	50. 35
5. 0	48. 45
5. 23	49. 35
6. 0	49. 10
6. 8	48. 50
6. 28	49. 50
6. 57	49. 0
7. 1	45. 0
7. 11	49. 45
7. 45	21. 20
8. 5	29. 10
8. 19	26. 40
8. 27	27. 20
8. 34	25. 20
9. 16	40. 40
9. 18	38. 45
9. 30	43. 5
9. 48	21. 0
9. 57	18. 20
10. 6	1. 10
10. 26	38. 50
10. 40	11. 20
10. 59	27. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 2	
h m	
8. 52	·1231
9. 6	·1231
9. 26	·1226
9. 43	·1238
10. 8	·1225
10. 49	·1230
11. 8	·1224
12. 3	·1224
12. 38	·1229
13. 1	·1221
13. 41	·1229
14. 14	·1227
14. 41	·1220
15. 24	·1229
15. 43	·1220
16. 54	·1230
17. 7	·1229
17. 31	·1233
17. 57	·1229
18. 33	·1228
19. 4	·1230
19. 33	·1223
20. 27	·1208
21. 3	·1203
21. 19	·1203
23. 59	·1210
Oct. 3	
0. 0	·1210
2. 0	·1220
2. 19	·1212
3. 12	·1226
4. 3	·1228
4. 45	·1234
4. 51	·1233
5. 8	·1239
5. 42	·1233
6. 19	·1242
6. 45	·1238
6. 52	·1243
6. 58	·1239
7. 0	·1244
7. 9	·1303
7. 13	·1285
7. 18	·1294
7. 36	·1240
7. 51	·1256
7. 53	·1254
8. 7	·1274
8. 22	·1250
8. 28	·1254
8. 41	·1220
8. 55	·1228
9. 4	·1243
9. 12	·1233
9. 23	·1247
9. 43	·1092
9. 57	·1133

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Oct. 3	
0. 7	·02302
0. 18	·02290
0. 37	·02300
1. 30	·02300
	·02356
1. 43	·02368
2. 42	·02517
3. 3	·02582
	·03810
6. 58	·03868
7. 3	·03920
7. 5	·03875
7. 11	·03878
7. 28	·03820
8. 1	·03897
8. 12	·03842
8. 19	·03836
8. 31	·03772
8. 50	·03833
8. 56	·03882
9. 33	·03485
9. 40	·03402
9. 46	·03324
9. 54	·03420
10. 1	·03643
10. 22	·03505
10. 35	·03678
10. 46	·03612
10. 55	·03604

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Oct. 3		
1. 0	67 ·2	66 ·9
3. 0	68 ·8	68 ·5
9. 0	66 ·8	67 ·5
21. 0	62 ·8	59 ·0

Greenwich Mean Solar Time.	Western Declination.
Oct. 3	
h m	° ′ ″
11. 15	20. 20. 40
11. 26	26. 0
11. 57	31. 50
12. 11	29. 40
12. 22	21. 20
12. 35	28. 25
12. 50	54. 20
12. 56	33. 10
13. 25	30. 0
13. 56	31. 5
14. 7	39. 40
14. 32	29. 30
14. 43	34. 25
14. 49	33. 50
14. 57	38. 0
15. 15	45. 0
	***
15. 50	48. 35
15. 57	51. 20
16. 3	20. 50. 10
16. 15	21. 8. 10
16. 30	9. 40
16. 41	5. 50
16. 52	10. 0
16. 57	9. 20
17. 8	14. 0
	(†)
19. 16	14. 20
19. 32	9. 15
19. 41	14. 0
	(†)
19. 57	21. 14. 0
20. 7	20. 56. 0
20. 18	20. 52. 40
20. 32	21. 13. 25
20. 42	7. 20
20. 51	11. 30
21. 23	7. 10
21. 26	21. 9. 25
21. 59	20. 58. 35
22. 15	57. 10
22. 21	57. 35
22. 30	54. 15
22. 38	58. 40
22. 46	57. 30
22. 55	58. 45
23. 2	55. 0
23. 3	59. 15
23. 9	56. 20
23. 20	57. 20
23. 28	59. 25
23. 34	57. 10
23. 52	57. 10
23. 59	58. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 3	
h m	
10. 18	·1238
10. 28	·1125
10. 43	·1185
10. 52	·1194
11. 0	·1154
11. 8	·1135
11. 17	·1147
11. 34	·1149
11. 43	·1155
11. 48	·1151
11. 57	·1159
12. 4	·1060
12. 19	·1124
12. 25	·1137
12. 28	·1132
12. 35	·1150
12. 42	·1093
12. 50	·1122
12. 55	·1062
13. 11	·1132
13. 28	·1197
13. 54	·1257
14. 0	·1246
14. 3	·1254
14. 14	·1236
14. 17	·1240
14. 27	·1229
14. 34	·1238
14. 45	·1218
14. 55	·1209
15. 10	·1221
15. 25	·1221
15. 37	·1212
15. 53	·1206
15. 58	·1199
16. 2	·1204
16. 12	·1202
16. 34	·1229
16. 40	·1222
16. 47	·1229
17. 0	·1212
17. 10	·1196
17. 17	·1217
17. 32	·1193
17. 47	·1209
18. 0	·1147
18. 9	·1170
18. 15	·1159
18. 26	·1170
18. 33	·1142
18. 37	·1149
18. 41	·1142
18. 48	·1152
18. 59	·1132
19. 7	·1160
19. 19	·1111
19. 25	·1100
19. 28	·1104

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Oct. 3	
h m	
11. 9	·03622
11. 16	·03686
11. 26	·03696
11. 31	·03717
11. 45	·03730
11. 49	·03708
11. 58	·03716
12. 0	·03686
12. 3	·03686
12. 20	·03557
12. 26	·03636
12. 32	·03587
12. 34	·03623
12. 43	·03382
12. 49	·03360
12. 57	·03111
13. 21	·03750
13. 33	·03938
14. 7	·04044
14. 15	·04062
14. 24	·04108
14. 30	·04115
14. 38	·04174
14. 57	·04200
15. 12	·04235
15. 51	·04245
15. 56	·04222
16. 14	·04216
16. 38	·04042
17. 15	·03990
17. 34	·03912
17. 47	·03906
17. 50	·03925
17. 58	·03858
18. 8	·03916
18. 23	·03895
18. 28	·03830
18. 34	·03876
18. 42	·03860
18. 49	·03777
19. 2	·03895
19. 10	·03858
19. 20	·03894
19. 32	·03897
19. 40	·03974
19. 46	·03992
20. 7	·03913
20. 27	·04006
20. 38	·04008
20. 46	·04042
21. 19	·04035
21. 33	·04044
21. 56	·04060
22. 12	·04118
23. 52	·04122
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

October 3. The Photographic Trace for the Declination Magnet was off the sheet in the direction of increasing declination, from $17^h.\ 8^m.$ to $19^h.\ 16^m.$, and again from $19^h.\ 41^m.$ to $19^h.\ 57^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	h m		h m		h m	°	°
		Oct. 3						
		19. 37	·1091					
		20. 8	·1116					
		20. 21	·1106					
		20. 30	·1109					
		20. 38	·1070					
		21. 10	·1108					
		21. 22	·1097					
		22. 20	·1176					
		22. 28	·1179					
		22. 41	·1142					
		22. 50	·1176					
		22. 54	·1171					
		23. 3	·1202					
		23. 7	·1185					
			(†)					
		23. 55	·1216					
		23. 59	·1220					
Oct. 4		Oct. 4		Oct. 4		Oct. 4		
0. 0	20. 58. 20	0. 0	·1221	1. 0	·04226*	1. 0	60 ·2	60 ·4
0. 5	21. 0. 0	0. 10	·1237	3. 0	·04218*	3. 0	61 ·5	62 ·0
0. 15	20. 58. 0	0. 18	·1228	9. 0	·03685*	9. 0	63 ·7	63 ·9
0. 22	59. 10	0. 22	·1236	22. 7	·03897*	22. 7	59 ·9	60 ·0
0. 37	55. 25	1. 22	·1223					
0. 44	57. 25	1. 30	·1220					
0. 50	57. 20	1. 35	·1230					
0. 57	58. 20	1. 53	·1225					
1. 6	56. 35	2. 4	·1227					
1. 22	58. 20	2. 15	·1242					
1. 32	57. 10	2. 21	·1237					
1. 38	58. 5	2. 36	·1245					
1. 56	20. 57. 0	2. 42	·1230					
2. 15	21. 1. 0	2. 48	·1233					
2. 22	0. 0	2. 53	·1219					
2. 29	1. 45	3. 4	·1214					
2. 33	0. 55	3. 25	·1290					
2. 39	21. 2. 15	3. 32	·1246					
2. 56	20. 55. 25	3. 35	·1252					
3. 0	55. 20	3. 39	·1244					
3. 8	52. 40	3. 48	·1265					
3. 21	52. 50	4. 0	·1233					
3. 29	54. 45	4. 9	·1241					
3. 36	44. 50	4. 18	·1234					
3. 48	41. 50	4. 23	·1240					
3. 58	48. 25	4. 31	·1229					
4. 7	44. 15	4. 34	·1236					
4. 14	45. 45	4. 39	·1229					
4. 25	44. 40	4. 44	·1236					
4. 32	45. 0	4. 52	·1227					
4. 42	43. 50	4. 57	·1244					
5. 1	49. 10	5. 5	·1256					
5. 9	54. 45	5. 16	·1226					
5. 20	50. 0	5. 25	·1246					
5. 27	51. 40	5. 37	·1225					
5. 38	46. 35	5. 43	·1226					
5. 45	47. 15	5. 55	·1211					
6. 11	36. 45	6. 13	·1223					
6. 20	43. 15	6. 19	·1214					
Oct. 4		Oct. 4						
6. 30	20. 41. 0	6. 27	·1211					
6. 37	43. 40	6. 38	·1244					
6. 42	38. 30	6. 43	·1236					
6. 50	49. 35	6. 48	·1253					
7. 3	43. 20	6. 58	·1204					
7. 9	44. 40	7. 7	·1217					
7. 21	38. 20	7. 15	·1210					
7. 38	51. 0	7. 27	·1243					
7. 45	48. 0	7. 31	·1237					
7. 50	48. 45	7. 34	·1241					
8. 0	43. 30	7. 41	·1222					
8. 8	44. 40	7. 47	·1229					
8. 12	48. 50	7. 58	·1215					
8. 22	43. 5	8. 9	·1230					
8. 31	41. 35	8. 17	·1212					
8. 38	46. 25	8. 29	·1222					
8. 49	44. 0	8. 34	·1233					
9. 0	47. 20	9. 0	·1208					
9. 9	41. 0	9. 5	·1208					
9. 30	47. 0	9. 10	·1217					
9. 38	46. 5	9. 15	·1214					
9. 43	46. 20	9. 23	·1221					
9. 52	45. 15	9. 32	·1210					
10. 1	47. 0	9. 43	·1208					
10. 12	44. 15	9. 49	·1216					
10. 21	42. 55	9. 56	·1217					
10. 32	39. 15	10. 0	·1212					
10. 50	38. 50	10. 24	·1219					
10. 59	37. 10	10. 30	·1211					
11. 25	41. 0	10. 36	·1215					
11. 35	39. 25	10. 46	·1212					
12. 1	44. 15	11. 8	·1228					
12. 12	42. 5	11. 22	·1222					
12. 19	44. 30	11. 43	·1227					
12. 32	37. 35	12. 0	·1220					
12. 45	44. 25	12. 7	·1227					
12. 55	39. 50	12. 20	·1210					
13. 29	45. 0	12. 27	·1251					
13. 44	43. 25	12. 44	·1222					
13. 57	41. 0	12. 53	·1220					
14. 3	44. 30	13. 0	·1222					
14. 17	43. 40	13. 21	·1236					
14. 30	46. 50	13. 31	·1229					
14. 42	47. 35	13. 54	·1212					
14. 57	44. 50	14. 9	·1228					
15. 3	45. 45	14. 23	·1213					
	***	14. 43	·1212					
15. 38	45. 20	15. 10	·1224					
16. 22	47. 10	15. 38	·1222					
16. 30	46. 20	16. 4	·1226					
17. 25	46. 50		***					
17. 31	47. 50	16. 30	·1222					
17. 34	46. 0		***					
17. 45	46. 25	17. 6	·1225					
17. 56	46. 0	17. 21	·1220					
18. 2:	47. 10	18. 0	·1223					
18. 14	46. 0	18. 5	·1226					
18. 25	46. 5	18. 16	·1222					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

October 4 to 8. The Vertical Force time-piece was in the hands of Mr. Dent for repair.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 4		Oct. 4		h m		h m	°	°
h m	° ′ ″	h m						
18. 32	20. 45. 10	18. 38	·1221					
18. 40	47. 15	18. 43	·1228					
19. 38	45. 25	18. 52	·1220					
	***	19. 18	·1215					
21. 47	51. 30	19. 46	·1219					
	***	20. 3	·1216					
22. 40	56. 55	20. 53	·1216					
22. 51	56. 10	21. 7	·1220					
23. 11	57. 35	21. 28	·1222					
23. 54	55. 0	21. 55	·1216					
23. 59	54. 55	22. 8	·1222					
		22. 17	·1220					
		22. 33	·1225					
		22. 54	·1223					
		23. 17	·1225					
		23. 28	·1228					
		23. 34	·1236					
		23. 59	·1232					
Oct. 5		Oct. 5		Oct. 5		Oct. 5		
0. 0	20. 54. 55	0. 0	·1232	9. 0	·03783*	9. 0	63·0	63·1
0. 39	54. 35	0. 10	·1234	21. 0	·04296*	21. 0	59·1	59·0
0. 49	53. 50		***					
0. 55	58. 5	1. 3	·1238					
1. 18	53. 40	1. 11	·1233					
1. 31	55. 45	1. 20	·1258					
1. 41	54. 15	1. 37	·1223					
1. 55	58. 35	1. 52	·1244					
2. 30	52. 25	2. 3	·1242					
2. 36	54. 10	2. 22	·1272					
3. 7	54. 40	2. 37	·1246					
3. 31	53. 30	2. 44	·1253					
3. 46	51. 0	2. 51	·1240					
4. 10	53. 0	3. 2	·1262					
4. 35	52. 40	3. 24	·1240					
4. 47	53. 40	3. 30	·1248					
5. 19	53. 0	3. 36	·1237					
5. 30	54. 0	3. 40	·1242					
5. 41	51. 35	3. 44	·1238					
5. 57	52. 30	3. 51	·1250					
6. 20	49. 35	3. 58	·1238					
6. 45	36. 10	4. 2	·1240					
6. 55	33. 40	4. 6	·1233					
7. 8	23. 40	4. 19	·1259					
7. 45	42. 40	4. 22	·1257					
8. 0	42. 40	4. 29	·1262					
8. 7	42. 0	4. 39	·1253					
8. 25	46. 25	4. 41	·1256					
8. 31	45. 20	4. 51	·1249					
8. 46	49. 30	5. 2	·1267					
12. 7	48. 30	5. 12	·1261					
12. 18	49. 15	5. 17	·1264					
12. 25	47. 20	5. 28	·1258					
12. 45	48. 15	5. 30	·1266					
13. 38	47. 40	5. 38	·1266					
14. 13	49. 0	5. 46	·1274					
16. 0	49. 0	5. 52	·1265					
16. 34	56. 0	5. 56	·1275					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 5		Oct. 5		h m		h m	°	°
h m	° ′ ″	h m						
17. 31	20. 52. 15	6. 0	·1270					
17. 38	53. 15	6. 31	·1252					
17. 46	53. 0	6. 39	·1255					
18. 0	20. 54. 50	6. 41	·1243					
18. 19	21. 2. 0	6. 53	·1238					
18. 29	0. 25	6. 58	·1227					
19. 30	21. 0. 10	7. 4	·1231					
19. 38	20. 58. 45	7. 8	·1227					
19. 44	58. 45	7. 28	·1253					
20. 8	53. 40	7. 37	·1258					
20. 19	54. 35	7. 43	·1253					
20. 36	52. 30	7. 54	·1258					
20. 46	55. 0	8. 14	·1250					
20. 55	53. 50	8. 25	·1259					
21. 0	57. 0	8. 42	·1252					
21. 17	55. 10	8. 52	·1273					
21. 27	56. 0	9. 7	·1263					
21. 31	53. 35	9. 18	·1272					
21. 35	55. 20	9. 30	·1271					
21. 54	53. 15	9. 39	·1262					
22. 28	55. 25	9. 52	·1264					
22. 45	53. 0	10. 1	·1263					
22. 52	54. 20	10. 18	·1267					
23. 0	53. 20	10. 26	·1262					
23. 11	55. 20	10. 30	·1270					
23. 24	56. 0	10. 36	·1268					
23. 28	58. 45	10. 41	·1271					
23. 32	56. 45	10. 54	·1263					
23. 41	57. 25	11. 6	·1267					
	***	11. 15	·1267					
23. 59	54. 0	11. 24	·1275					
		11. 31	·1264					
		11. 36	·1268					
		11. 47	·1271					
		11. 57	·1265					
		12. 8	·1265					
		12. 24	·1274					
		12. 31	·1259					
		12. 45	·1265					
		13. 4	·1263					
		13. 39	·1262					
		14. 11	·1260					
		14. 21	·1264					
		14. 52	·1263					
		15. 5	·1266					
		15. 22	·1261					
		15. 33	·1264					
		15. 39	·1261					
		15. 54	·1265					
		16. 10	·1266					
		16. 18	·1261					
		16. 22	·1263					
		16. 31	·1259					
		16. 42	·1262					
		17. 4	·1277					
		17. 17	·1275					
		17. 20	·1277					
		17. 30	·1270					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Oct. 5 h m		h m		h m	°	°
		17. 35	·1271					
		17. 46	·1257					
		17. 54	·1258					
		18. 5	·1248					
		18. 36	·1269					
		18. 45	·1262					
		19. 50	·1222					
		20. 0	·1208					
		20. 10	·1208					
		20. 16	·1200					
		20. 23	·1208					
		20. 29	·1193					
		20. 37	·1196					
		20. 41	·1191					
		20. 45	·1194					
		20. 56	·1174					
		21. 1	·1198					
		21. 15	·1206					
		21. 20	·1182					
		21. 25	·1198					
		21. 31	·1189					
		21. 38	·1199					
		21. 51	·1186					
		22. 7	·1201					
		22. 15	·1194					
		22. 18	·1203					
		22. 21	·1198					
		22. 26	·1208					
		22. 31	·1196					
		22. 42	·1198					
		22. 46	·1190					
		23. 0	·1189					
		23. 12	·1202					
		23. 22	·1203					
		23. 26	·1192					
		23. 31	·1220					
		23. 33	·1213					
			(†)					
Oct. 6		Oct. 6		Oct. 6		Oct. 6		
0. 0	20. 54. 0		(†)	1. 0	·04242*	1. 0	62 ·2	62 ·0
0. 18	48. 10	0. 23	·1228	3. 0	·04147*	3. 0	64 ·6	64 ·4
0. 29	51. 45	0. 37	·1244	9. 0	·03752*	9. 0	65 ·2	64 ·6
0. 37	49. 40	0. 46	·1230	21. 0	·04353*	21. 0	57 ·0	57 ·0
0. 42	52. 20	0. 56	·1242					
0. 55	51. 25	1. 14	·1225					
0. 57	53. 30	1. 26	·1228					
1. 11	52. 15	1. 35	·1218					
1. 29	55. 50	1. 44	·1233					
1. 32	55. 10	1. 50	·1228					
1. 41	57. 40	2. 0	·1240					
1. 49	55. 15	2. 8	·1238					
1. 57	57. 45	2. 15	·1249					
2. 4	57. 0	2. 20	·1250					
2. 12	59. 10	2. 25	·1260					
2. 23	54. 30	2. 28	·1253					
2. 25	55. 40	2. 30	·1260					
2. 33	51. 35	2. 34	·1252					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 6 h m	° ′ ″	Oct. 6 h m		h m		h m	°	°
2. 43	20. 55. 40	2. 38	·1262					
2. 50	20. 55. 30	2. 47	·1235					
2. 57	21. 0. 0	3. 21	·1308					
3. 5	20. 46. 5	3. 23	·1272					
3. 8	50. 30	3. 31	·1294					
3. 14	47. 10	3. 46	·1266					
3. 16	53. 0	3. 50	·1272					
3. 25	35. 30	3. 57	·1260					
3. 32	32. 40	4. 6	·1233					
3. 39	35. 30	4. 14	·1238					
3. 41	35. 5	4. 21	·1230					
4. 0	47. 30	4. 25	·1210					
4. 7	45. 55	4. 35	·1233					
4. 15	49. 20	4. 38	·1205					
4. 22	51. 30	4. 44	·1206					
4. 27	46. 30	4. 52	·1236					
4. 36	54. 50	4. 59	·1223					
4. 48	37. 35	5. 8	·1222					
4. 55	47. 10	5. 14	·1212					
5. 3	44. 5	5. 22	·1219					
5. 10	46. 25	5. 27	·1211					
5. 19	41. 40	5. 37	·1217					
5. 23	42. 40	5. 48	·1206					
5. 27	41. 45	5. 52	·1207					
5. 39	44. 5	6. 0	·1200					
5. 46	43. 40	6. 9	·1210					
5. 53	45. 15	6. 17	·1209					
6. 4	43. 15	6. 24	·1244					
6. 7	43. 25	6. 37	·1185					
6. 14	42. 10	6. 48	·1234					
6. 24	56. 0	6. 53	·1224					
6. 38	28. 40	7. 8	·1250					
6. 45	35. 25	7. 20	·1212					
6. 56	33. 10	7. 24	·1233					
7. 8	45. 15	7. 30	·1221					
7. 18	37. 0	7. 35	·1224					
7. 23	45. 0	7. 44	·1194					
7. 38	50. 35	7. 58	·1219					
7. 51	41. 30	8. 12	·1213					
8. 0	44. 35	8. 20	·1210					
8. 18	40. 10	8. 42	·1200					
8. 34	42. 0	9. 6	·1208					
8. 57	39. 50	9. 24	·1208					
9. 13	40. 40	9. 40	·1198					
9. 22	39. 30	9. 45	·1201					
9. 52	40. 0	9. 55	·1191					
10. 8	38. 25		***					
10. 40	43. 45	10. 59	·1225					
10. 52	46. 50	11. 3	·1224					
11. 5	48. 20	11. 15	·1229					
11. 35	47. 20	12. 2	·1228					
11. 48	48. 10	12. 14	·1232					
12. 20	48. 20	12. 44	·1231					
13. 5	49. 20		***					
13. 37	49. 20	15. 8	·1233					
14. 34	50. 0	15. 16	·1230					
14. 57	48. 10	15. 52	·1238					
15. 2	48. 20	16. 23	·1232					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Oct. 6	
h m	° ′ ″
15. 15	20. 47. 0
15. 32	47. 50
15. 57	46. 45
16. 54	50. 20
17. 37	47. 0
19. 37	45. 5
20. 3	44. 0
	***
21. 23	47. 40
21. 34	47. 15
23. 30	55. 45
23. 59	55. 25
Oct. 7	
0. 0	20. 55. 25
0. 39	56. 15
	***
3. 41	50. 30
	***
5. 52	49. 25
6. 4	50. 0
	***
8. 37	49. 0
8. 48	48. 15
9. 19	48. 30
10. 6	46. 30
10. 53	48. 15
11. 12	48. 0
11. 38	48. 30
13. 16	48. 0
13. 30	50. 35
14. 4	48. 25
19. 15	47. 50
20. 49	47. 25
22. 8	50. 40
22. 24	52. 10
22. 45	52. 15
23. 12	53. 30
23. 59	53. 50
Oct. 8	
0. 0	20. 53. 50
0. 27	53. 45
0. 35	54. 50
0. 53	53. 20
	***
5. 46	50. 10
6. 3	46. 50
6. 26	44. 45
7. 6	48. 40
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 6	
h m	
16. 52	·1235
17. 0	·1234
17. 15	·1239
	***
18. 45	·1240
	***
19. 35	·1239
	***
21. 39	·1227
21. 51	·1229
21. 56	·1225
	***
22. 30	·1227
	***
23. 3	·1231
	***
23. 59	·1233
Oct. 7	
0. 0	·1233
0. 18	·1237
	(†)
1. 0	·1238*
3. 0	·1244*
9. 0	·1249*
9. 26	·1251
9. 51	·1254
10. 13	·1250
10. 34	·1252
11. 4	·1248
11. 36	·1250
11. 50	·1248
12. 12	·1249
12. 20	·1247
12. 45	·1248
12. 56	·1247
13. 13	·1249
13. 24	·1257
14. 20	·1247
16. 44	·1252
18. 34	·1252
19. 33	·1247
21. 48	·1238
22. 34	·1238
23. 45	·1239
23. 59	·1240
Oct. 8	
0. 0	·1240
0. 23	·1241
0. 30	·1242
0. 40	·1246
1. 2	·1243
1. 16	·1244
2. 6	·1245
2. 36	·1250
3. 10	·1245
3. 47	·1248

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Oct. 7	
1. 0	·04185*
3. 0	·04093*
9. 0	·03594*
21. 0	·03728*
Oct. 8	
1. 0	·03184*
3. 0	·03114*
9. 0	·03655*
21. 0	·03973*

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Oct. 7		
1. 0	58 ·3	57 ·0
3. 0	59 ·0	57 ·9
9. 0	57 ·3	57 ·8
21. 0	57 ·6	56 ·9
22. 0	58 ·0	57 ·0
23. 0	58 ·9	57 ·8
Oct. 8		
0. 0	59 ·9	58 ·6
1. 0	61 ·0	59 ·8
2. 0	62 ·0	60 ·7
3. 0	63 ·1	61 ·7
6. 0	64 ·0	62 ·5
9. 0	63 ·0	62 ·0
12. 0	61 ·2	60 ·9
18. 0	59 ·0	58 ·5
21. 0	58 ·7	58 ·2
22. 0	59 ·0	58 ·2

Greenwich Mean Solar Time.	Western Declination.
Oct. 8	
h m	° ′ ″
8. 39	20. 48. 20
9. 0	46. 20
9. 3	48. 5
10. 13	48. 10
10. 28	47. 35
10. 38	48. 10
11. 1	48. 0
11. 29	50. 0
11. 53	50. 0
12. 30	48. 10
16. 27	49. 0
16. 57	48. 0
17. 53	47. 35
18. 6	46. 50
19. 15	44. 50
19. 25	44. 0
19. 50	44. 25
19. 54	46. 0
20. 0	43. 40
20. 12	44. 40
20. 35	44. 15
22. 30	52. 20
22. 41	52. 50
23. 15	58. 35
23. 30	59. 25
23. 38	58. 30
23. 53	59. 0
23. 59	59. 0
Oct. 9	
0. 0	20. 59. 0
0. 7	59. 10
0. 19	58. 15
0. 27	58. 40
0. 33	20. 58. 30
0. 42	21. 0. 0
0. 48	20. 59. 35
0. 56	21. 1. 0
1. 5	0. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 8	
h m	
4. 14	·1246
4. 24	·1246
4. 34	·1244
4. 58	·1245
5. 9	·1248
5. 23	·1245
5. 30	·1246
5. 43	·1241
5. 47	·1241
5. 57	·1232
6. 7	·1236
6. 14	·1234
6. 31	·1243
7. 14	·1241
7. 41	·1245
7. 53	·1241
8. 9	·1246
8. 20	·1245
9. 17	·1248
9. 30	·1245
9. 47	·1248
10. 6	·1246
10. 27	·1250
10. 51	·1250
11. 12	·1259
11. 30	·1259
11. 57	·1254
12. 49	·1252
13. 7	·1255
13. 16	·1250
13. 40	·1251
13. 55	·1250
15. 40	·1252
16. 13	·1252
16. 47	·1255
17. 22	·1253
18. 12	·1255
18. 30	·1253
19. 11	·1250
20. 15	·1240
21. 2	·1221
21. 18	·1227
21. 40	·1228
22. 10	·1228
22. 28	·1225
23. 1	·1231
	(†)
Oct. 9	
	(†)
0. 53	·1240
1. 1	·1251
1. 7	·1248
1. 11	·1251
1. 31	·1253
1. 55	·1264
2. 2	·1242
2. 10	·1231

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Oct. 9	
	(†)
1. 0	·03617
2. 6	·03903
2. 50	·03862
4. 27	·03640
	(†)
6. 0	·03943
6. 31	·04078
6. 56	·04138

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 8		
h m	°	°
23. 0	59 ·5	58 ·4
Oct. 9		
0. 0	60 ·0	58 ·8
1. 0	61 ·0	59 ·8
2. 0	61 ·8	60 ·8
3. 0	62 ·8	62 ·8
9. 0	63 ·1	64 ·7
21. 0	58 ·5	60 ·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 9		Oct. 9		Oct. 9		h m	°	°
h m	° ′ ″	h m		h m				
1. 16	21. 1. 30	2. 25	·1248	7. 55	·04130			
1. 28	1. 10	2. 27	·1247	8. 44	·04062			
1. 39	21. 1. 50	2. 34	·1255	9. 6	{·04052			
1. 43	20. 58. 45	2. 38	·1252		{·04200			
1. 54	57. 10	2. 58	·1253	15. 0	·04122			
2. 12	57. 50	3. 2	·1250	20. 5	·04314			
2. 18	59. 10	3. 13	·1256		(†)			
2. 50	54. 30	3. 25	·1247	21. 0	·04416*			
3. 4	57. 0	3. 40	·1254					
3. 17	53. 10	3. 52	·1249					
3. 22	57. 0	4. 6	·1248					
3. 35	20. 58. 10	4. 19	·1244					
3. 48	21. 0. 30	4. 42	·1236					
4. 5	20. 59. 25	4. 49	·1236					
4. 13	21. 0. 40	4. 59	·1233					
4. 30	21. 0. 40	5. 7	·1237					
4. 45	20. 58. 40	5. 15	·1233					
5. 20	58. 25	5. 22	·1235					
5. 40	51. 30	5. 33	·1225					
6. 14	54. 30	5. 40	·1209					
6. 40	49. 15	6. 7	·1257					
7. 0	53. 30	6. 25	·1234					
7. 14	51. 25	6. 33	·1244					
7. 19	51. 20	6. 38	·1236					
7. 25	50. 45	6. 43	·1243					
7. 33	52. 30	6. 55	·1233					
7. 56	42. 55	7. 0	·1237					
8. 2	43. 10	7. 5	·1231					
8. 15	42. 25	7. 11	·1241					
8. 30:	45. 50	7. 21	·1233					
8. 43	39. 30	7. 25	·1236					
8. 50	41. 40	7. 42	·1214					
9. 4	37. 10	7. 56	·1227					
9. 17	40. 30	8. 5	·1227					
9. 57	36. 20	8. 10	·1233					
10. 9	39. 10	8. 26	·1223					
10. 27	39. 50	8. 36	·1231					
10. 38	43. 30	8. 43	·1223					
10. 57	45. 40	8. 58	·1231					
11. 28	46. 0	9. 14	·1229					
11. 35	46. 20	9. 24	·1234					
11. 41	46. 5	9. 31	·1242					
12. 9	47. 50	9. 45	·1244					
12. 22	47. 25	9. 50	·1250					
13. 16	49. 35	10. 1	·1242					
13. 24	50. 25	10. 20	·1238					
13. 38	49. 15	10. 29	·1245					
14. 9	48. 40	10. 38	·1242					
14. 22	50. 0	10. 57	·1252					
14. 26	48. 50	11. 2	·1245					
14. 34	50. 10	11. 4	·1250					
14. 45	49. 20	11. 18	·1240					
15. 2	48. 55	11. 40	·1246					
15. 6	49. 25	13. 22	·1244					
15. 14	48. 40	13. 30	·1248					
15. 32	48. 55	13. 35	·1245					
15. 40	48. 15	14. 14	·1244					
15. 51	49. 5	14. 20	·1250					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 9		Oct. 9				h m	°	°
h m	° ′ ″	h m		h m				
15. 59	20. 48. 20	14. 27	·1245					
16. 11	49. 50	14. 37	·1253					
16. 17	49. 0	14. 45	·1250					
17. 22	48. 30	15. 33	·1254					
17. 29	49. 20	15. 40	·1250					
	***	15. 50	·1244					
18. 58	47. 45	16. 1	·1250					
19. 50	46. 0	16. 14	·1254					
	***	16. 19	·1252					
21. 31	49. 35	17. 26	·1252					
	***	17. 42	·1257					
22. 45	55. 30		***					
	***	19. 5	·1252					
23. 42	55. 25	19. 51	·1246					
23. 59	54. 0	21. 0	·1239					
		21. 15	·1237					
		21. 50	·1236					
		22. 25	·1234					
		22. 37	·1239					
		22. 44	·1239					
		22. 48	·1242					
		23. 0	·1239					
		23. 18	·1243					
		23. 36	·1243					
		23. 47	·1246					
		23. 59	·1241					
Oct. 10		Oct. 10		Oct. 10		Oct. 10		
0. 0	20. 54. 0	0. 0	·1241		(†)	1. 0	62·5	64·2
0. 21	54. 30	0. 21	·1247	1. 0	·03187*	3. 0	65·0	66·0
0. 30	53. 20	0. 31	·1242	2. 7	·03005	9. 0	64·0	65·0
0. 37	54. 5	0. 36	·1246	2. 53	·02877	21. 0	59·9	60·5
1. 17	53. 25	1. 22	·1248	4. 45	{·02945			
1. 25	54. 5	1. 30	·1245		{·03010			
1. 31	53. 10	1. 37	·1250	5. 9	{·02957			
1. 44	54. 0	2. 5	·1252		{·03102			
3. 12	52. 10	2. 29	·1248	6. 10	{·03008			
3. 20	52. 35	2. 51	·1252		{·03138			
3. 28	51. 40	3. 34	·1248	9. 34:	·03118			
4. 30	51. 40	3. 49	·1250	13. 1	·03410			
4. 41	52. 25	4. 22	·1250	16. 55	·03300			
4. 51	51. 50	4. 36	·1244	17. 9	·03247			
	***	4. 49	·1254	17. 50	{·03278			
6. 0	52. 35	5. 13	·1243		{·03238			
	***	5. 33	·1250	18. 17	·03188			
10. 5	49. 30	5. 38	·1259	19. 33	·03255			
10. 13	50. 0	5. 54	·1250	23. 31	·03263			
10. 24	49. 30	6. 0	·1254	23. 39	·03290			
11. 45	49. 0	6. 10	·1255	23. 45	·03277			
	***	6. 18	·1250	23. 59	·03272			
15. 2	49. 55	6. 30	·1255					
15. 26	50. 20	6. 49	·1252					
15. 30	52. 0	7. 24	·1256					
15. 39	50. 35	7. 30	·1260					
16. 0	50. 55	7. 37	·1254					
16. 28	54. 10	8. 24	·1257					
16. 34	53. 45	8. 41	·1254					
16. 48	20. 56. 0	9. 7	·1256					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

VERTICAL FORCE.—October 10. The adjustments were altered, so that the readings were diminished by $6^{div}\cdot95$., or by 0·010994 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 10		Oct. 10						
h m	° ′ ″	h m		h m		h m	°	°
17. 11	21. 3. 55	9. 11	·1254					
17. 16	1. 20	9. 22	·1259					
17. 21	1. 20	9. 36	·1256					
17. 26	0. 0	9. 41	·1252					
17. 32	21. 0. 0	10. 2	·1256					
17. 39	20. 59. 10	10. 16	·1266					
17. 51	21. 4. 40	10. 22	·1256					
17. 56	4. 35	10. 32	·1262					
17. 58	11. 20	10. 38	·1256					
	(†)	10. 42	·1262					
18. 24	21. 11. 15	10. 49	·1259					
18. 46	20. 47. 55	10. 59	·1266					
19. 0	44. 20	11. 7	·1257					
19. 12	46. 50	11. 12	·1262					
19. 30	46. 20	11. 16	·1259					
19. 40	45. 10	11. 23	·1264					
19. 50	45. 50	11. 36	·1261					
20. 0	45. 10	11. 39	·1265					
20. 34	46. 0	11. 45	·1254					
20. 49	45. 30	11. 50	·1259					
21. 5	48. 40	12. 0	·1259					
21. 18	48. 55	12. 7	·1256					
21. 30	50. 50	12. 28	·1261					
21. 46	49. 50	12. 41	·1259					
	***	13. 0	·1260					
22. 51	55. 45	13. 3	·1264					
23. 0	54. 35	13. 8	·1260					
23. 2	56. 15	14. 56	·1263					
23. 12	55. 10	15. 19	·1263					
23. 15	57. 10	15. 22	·1268					
23. 17	56. 35	15. 35	·1265					
23. 31	57. 0	16. 14	·1268					
23. 43	58. 0	16. 26	·1276					
23. 54	54. 30	16. 37	·1275					
23. 59	53. 10	17. 2	·1263					
		17. 8	·1270					
		17. 32	·1206					
		17. 47	·1186					
		18. 7	·1228					
		18. 10	·1223					
		18. 14	·1255					
		18. 18	·1250					
		18. 25	·1268					
		18. 52	·1228					
		19. 0	·1227					
		19. 4	·1234					
		19. 17	·1226					
		19. 36	·1220					
		19. 47	·1223					
		19. 59	·1220					
		20. 11	·1220					
		20. 47	·1210					
		21. 5	·1222					
		21. 20	·1217					
		21. 26	·1222					
		22. 14	·1207					
		22. 28	·1216					
		22. 32	·1208					
Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Oct. 10 h m		h m		h m	°	°
		22. 38	·1213					
		22. 44	·1206					
		22. 49	·1210					
		22. 59	·1203					
		23. 3	·1214					
		23. 8	·1209					
		23. 35	·1211					
			(†)					
Oct. 11		Oct. 11		Oct. 11		Oct. 11		
0. 0	20. 53. 5		(†)		(†)	1. 0	62 ·0	62 ·0
0. 3	55. 0	1. 0	·1218*	1. 0	·03290*	3. 0	63 ·4	64 ·2
0. 18	53. 35	1. 3	·1238	1. 41	·03192	9. 0	63 ·3	63 ·7
0. 33	59. 30	1. 24	·1222	2. 10	·03180	21. 5	60 ·3	60 ·5
0. 39	56. 15	1. 40	·1245	2. 42	·03198			
0. 55	54. 0		(†)	3. 45	·02944			
1. 0	54. 10	3. 0	·1249*	4. 15	·02833			
1. 12	20. 58. 0	3. 18	·1249	5. 33	·02877			
1. 37	21. 1. 5	3. 34	·1242	7. 56	·02930			
1. 48	1. 0	3. 47	·1243	9. 5	·02926			
2. 9	4. 10	3. 54	·1238		·02982			
2. 23	21. 1. 5	4. 7	·1240	9. 57	·02976			
2. 50	20. 43. 15	4. 18	·1237	10. 55	·03008			
3. 0	44. 10	4. 26	·1240	12. 12	·03000			
3. 35	51. 35	4. 35	·1237	13. 14	·03058			
	***	4. 48	·1241	17. 0	·03320			
4. 38	49. 10	5. 0	·1240	17. 56	·03345			
	***	5. 26	·1243	22. 22	·03254			
5. 15	50. 25	5. 51	·1235	23. 15	·03284			
5. 59	49. 5	6. 11	·1247	23. 59	·03290			
6. 12	49. 25	6. 21	·1236					
6. 37	45. 50	6. 36	·1229					
6. 56	47. 30	6. 55	·1242					
7. 8	43. 55	7. 6	·1232					
7. 15	44. 50	7. 15	·1233					
7. 20	41. 45	7. 20	·1228					
7. 28	43. 25	7. 27	·1238					
7. 43	40. 10	7. 33	·1229					
7. 56	40. 50	7. 44	·1236					
8. 8	44. 10	7. 51	·1230					
8. 15	43. 45	8. 2	·1238					
8. 22	45. 15	8. 25	·1237					
8. 45	46. 25	8. 32	·1232					
8. 57	43. 45	8. 38	·1234					
8. 59	45. 25	8. 49	·1231					
9. 4	47. 0	9. 19	·1237					
9. 15	46. 30	9. 28	·1247					
9. 29	48. 20	9. 45	·1247					
9. 33	48. 10	9. 58	·1239					
9. 52	51. 25	10. 10	·1238					
10. 10	48. 45	10. 25	·1239					
10. 19	49. 0	10. 36	·1237					
10. 41	47. 40	11. 3	·1252					
11. 1	44. 35	11. 19	·1242					
11. 23	46. 15	11. 31	·1252					
11. 35	45. 10	11. 43	·1251					
11. 57	49. 0	11. 58	·1247					
12. 21	46. 50		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

October 10. The Photographic Trace for the Declination Magnet was off the sheet in the direction of increasing declination from $17^h.\ 58^m.$ to $18^h.\ 24^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 11		Oct. 11						
h m	° ′ ″	h m		h m		h m	°	°
12. 25	20. 47. 15	12. 10	·1238					
12. 42	46. 40		***					
13. 10	48. 10	12. 53	·1244					
13. 54	47. 10	13. 14	·1241					
14. 0	48. 10	13. 33	·1245					
	(†)	13. 40	·1243					
14. 36	46. 15	13. 56	·1247					
14. 44	47. 20	14. 9	·1241					
14. 50	46. 25	14. 35	·1239					
15. 5	46. 20	14. 45	·1243					
15. 17	45. 30	15. 7:	·1237					
15. 22	46. 25	15. 28	·1242					
15. 32	45. 20		***					
15. 41	45. 50	15. 46	·1242					
15. 55	45. 20		***					
16. 3	45. 40	17. 7	·1237					
16. 27	44. 0	17. 21	·1233					
16. 37	45. 0		***					
16. 52	44. 30	17. 43	·1235					
17. 29	47. 40		***					
17. 49	46. 35	18. 36	·1235					
	***	19. 13	·1244					
18. 39	49. 30	19. 19	·1242					
18. 55	47. 50	19. 30	·1242					
19. 29	46. 40	19. 40	·1246					
19. 35	47. 0	19. 49	·1233					
19. 40	46. 30	20. 4	·1244					
19. 44	47. 25	21. 30	·1232					
19. 57	45. 20	21. 43	·1238					
20. 36	47. 15	21. 55	·1233					
20. 58	48. 50	22. 2	·1235					
21. 39	49. 50	22. 20	·1229					
21. 45	51. 30	22. 42	·1235					
	(†)	23. 0	·1225					
22. 54	51. 20	23. 25	·1237					
22. 57	52. 10	23. 35	·1234					
23. 14	51. 10	23. 59	·1235					
23. 18	52. 35							
23. 35	51. 45							
23. 57	52. 30							
23. 59	52. 20							
Oct. 12		Oct. 12		Oct. 12		Oct. 12		
0. 0	20. 52. 10	0. 0	·1235	0. 0	·03290	9. 0	61 ·6	62 ·0
0. 26	52. 0		***	6. 13	·03156	21. 0	55 ·6	56 ·2
0. 49	52. 40	0. 30	·1234	6. 51	·03158			
1. 10	51. 40	0. 42	·1231	7. 22	·03092			
1. 49	51. 55	0. 55	·1233	7. 30	·03117			
2. 16	49. 50	1. 15	·1232	8. 7	·03035			
2. 26	50. 20	2. 0	·1233	8. 30	·03016			
2. 45	49. 30	2. 27	·1238	9. 51	·03040			
2. 57	50. 0	2. 43	·1246	11. 6	·03098			
3. 15	48. 15	2. 57	·1242	13. 37	·03268			
3. 18	48. 50	3. 13	·1245	16. 34	·03255			
3. 36	48. 0	3. 27	·1237	20. 37	·03140			
3. 44	48. 20	4. 5	·1231	22. 9	{·03003			
3. 55	48. 0	4. 15	·1237		{·02757			
4. 49	47. 50		***	23. 30	·02756			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 12		Oct. 12		Oct. 12				
h m	° ′ ″	h m		h m		h m	°	°
6. 1	20. 48. 50	4. 30	·1236	23. 59	·02735			
6. 18	45. 15		***					
6. 29	45. 0	4. 49	·1242					
6. 36	46. 10		***					
6. 49	45. 0	5. 22	·1242					
7. 7	46. 30	5. 35	·1246					
7. 19	41. 50		***					
7. 30	24. 0	6. 14	·1232					
7. 37	39. 10	6. 36	·1243					
7. 58	34. 20	6. 56	·1243					
8. 16	37. 25	7. 23	·1215					
8. 33	38. 40	7. 38	·1287					
8. 43	37. 15	7. 48	·1290					
9. 24:	42. 10	7. 55	·1288					
10. 11:	37. 0	8. 32	·1238					
10. 32	40. 0	8. 40	·1247					
10. 42	40. 0	8. 54	·1242					
11. 8	45. 20	9. 7	·1242					
11. 22	44. 30		***					
11. 57	44. 35	9. 30:	·1245					
12. 11	46. 0		***					
12. 59	47. 0	9. 50	·1241					
13. 15	49. 0		***					
13. 41	45. 45	10. 34	·1246					
13. 58:	46. 40	10. 47	·1240					
15. 8	43. 5	11. 30:	·1254					
18. 41	43. 10	11. 54	·1248					
19. 17	45. 55	12. 22	·1257					
19. 39	46. 0	12. 34	·1253					
19. 43	46. 55	12. 38	·1258					
20. 5	45. 10		***					
20. 20	46. 25	13. 5	·1243					
20. 37	44. 35		***					
21. 3	45. 15	13. 20	·1251					
21. 35	44. 30		***					
22. 10	47. 40	14. 14	·1250					
22. 25	47. 35		***					
22. 47	48. 30	16. 15	·1256					
	(†)		***					
		17. 37	·1261					
			***					
		18. 1	·1259					
		18. 12	·1260					
			***					
		18. 55	·1245					
		19. 5	·1250					
		19. 15	·1237					
		19. 22	·1246					
		19. 37	·1246					
		19. 44	·1243					
		20. 0	·1252					
		20. 22	·1254					
			***					
		21. 1	·1253					
			***					
		21. 47	·1252					
			***					
		21. 51	·1255					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	Readings of Thermometers. (Of V. F. Magnet.)
h m	° ′ ″	Oct. 12 h m		h m		h m	°	°
		22. 46	·1251					
		22. 52	·1256					
			***					
		23. 11	·1254					
		23. 59	·1258					
Oct. 13		Oct. 13		Oct. 13		Oct. 13		
	(†)	0. 0	·1258	0. 0	·02735	1. 0	57·8	58·0
0. 45	20. 49. 10		(†)	1. 38	·02722	3. 0	59·8	60·1
1. 2	49. 0	0. 39	·1257	4. 54	·02378	9. 0	60·3	61·0
1. 16	50. 20	1. 0	·1259	6. 35	·02532	21. 0	61·8	62·0
1. 50	46. 40	1. 12	·1265	9. 1	·02636			
2. 8	45. 50	1. 43	·1260	9. 38	·02623			
2. 16	46. 0	1. 47	·1265	10. 18	·02668			
2. 42	45. 0	2. 58	·1262	12. 35	·02722			
3. 1	46. 0	3. 14	·1264	12. 48	·02738			
3. 20	45. 35	3. 28	·1260	13. 16	·02723			
3. 31	46. 30	3. 44	·1266	13. 31	·02734			
3. 54	46. 0	4. 1	·1260	15. 21	·02626			
4. 5	47. 0	4. 13	·1263	15. 57	·02675			
4. 35	46. 0	4. 34	·1259	17. 11	·02684			
5. 1	46. 20	4. 56	·1260	18. 23	·02652			
5. 18	45. 0	5. 16	·1257	18. 40	·02666			
5. 31	45. 50	5. 29	·1261	19. 51	·02658			
5. 42	45. 0	5. 40	·1257	20. 21	·02693			
6. 0	44. 30	5. 55	·1265	22. 56	·02715			
6. 8	43. 0	6. 11	·1258	23. 59	·02738			
6. 37	44. 50	6. 18	·1265					
6. 56	41. 20	6. 45	·1268					
7. 2	42. 40	6. 53	·1266					
7. 26	39. 15	7. 8	·1274					
7. 58	42. 50	7. 17	·1269					
8. 27	42. 10	7. 24	·1278					
8. 33	42. 25	7. 38	·1280					
8. 53	40. 10	8. 3	·1266					
9. 8	43. 35	8. 33	·1265					
9. 31	44. 25	9. 2	·1280					
10. 11	39. 35	9. 34	·1262					
10. 57	43. 0	9. 57	·1254					
11. 1	42. 25	10. 21	·1260					
11. 4	43. 20	10. 28	·1258					
11. 25	42. 15	11. 2	·1261					
11. 41	43. 10	11. 10	·1259					
12. 7	41. 15	11. 25	·1262					
12. 22	41. 20	11. 47	·1253					
12. 56	36. 0	12. 5	·1261					
13. 7	39. 10	12. 24	·1249					
13. 17	39. 15	12. 46	·1277					
13. 37	41. 20	13. 3	·1251					
13. 53	45. 20	13. 30	·1292					
14. 2	43. 50	13. 58	·1279					
14. 15	44. 50	14. 8	·1289					
15. 22	36. 25	14. 29	·1282					
16. 5	40. 0	15. 0	·1278					
16. 36	40. 30	15. 18	·1268					
16. 44	40. 10	15. 30	·1257					
16. 56	41. 45	15. 50	·1253					
17. 3	44. 15	16. 4	·1254					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	Readings of Thermometers. (Of V. F. Magnet.)
Oct. 13 h m	° ′ ″	Oct. 13 h m		h m		h m	°	°
17. 28	20. 42. 50	16. 14	·1250					
17. 46	43. 10	16. 47	·1253					
17. 58	42. 40	16. 57	·1257					
18. 33	46. 0	17. 11	·1250					
18. 42	48. 0	17. 36	·1258					
18. 59	47. 0	18. 15	·1226					
19. 19	44. 0	18. 39	·1234					
19. 24	46. 0	19. 8	·1235					
19. 43	44. 20	19. 21	·1248					
19. 47	43. 0	19. 30	·1244					
	***	19. 34	·1247					
21. 0	42. 25	19. 43	·1240					
21. 19	44. 25	19. 48	·1244					
21. 27	44. 0	22. 0	·1230					
	***	22. 15	·1238					
22. 6	44. 25	22. 22	·1234					
22. 16	48. 0	22. 28	·1237					
22. 23	47. 55	22. 38	·1228					
22. 30	49. 0	22. 48	·1234					
22. 41	47. 15	22. 56	·1230					
22. 49	48. 50	23. 1	·1232					
22. 58	48. 20	23. 18	·1229					
23. 8	49. 50	23. 32	·1235					
23. 15	48. 55	23. 51	·1225					
23. 21	50. 25	23. 59	·1225					
23. 26	49. 50							
23. 36	52. 0							
23. 43	51. 20							
23. 46	52. 0							
23. 59	51. 15							
Oct. 14		Oct. 14		Oct. 14		Oct. 14		
0. 0	20. 51. 15	0. 0	·1225	0. 0	·02738	1. 0	63·5	63·6
0. 15	49. 40		(†)	2. 55	·02942	3. 0	64·5	64·0
0. 16	56. 0	1. 0	·1233*	4. 9	·02817	9. 0	65·0	65·8
0. 45	54. 25	1. 2	·1241	9. 48	·02936	21. 0	65·3	65·1
1. 4	55. 25	1. 10	·1248	10. 22	·02880	22. 0	67·2	65·8
1. 24	20. 59. 5	1. 25	·1242	13. 40	·02898	23. 0	66·9	66·5
1. 52	21. 0. 5	1. 36	·1244	14. 31	·02862			
2. 1	1. 25	1. 45	·1240	16. 33	·02918			
2. 5	1. 10	1. 57	·1244	21. 24	·02955			
2. 15	21. 5. 10	2. 2	·1239	22. 23	·02912			
2. 38	20. 51. 10	2. 27	·1250	23. 26	·02916			
2. 49	53. 30	2. 30	·1235		·03212			
2. 58	52. 30	2. 45	·1260	23. 59	·03212			
3. 0	54. 20	3. 16	·1242					
3. 10	52. 35	3. 22	·1247					
3. 15	53. 40	3. 58	·1244					
3. 21	53. 20	4. 8	·1239					
3. 29	55. 30	5. 11	·1247					
4. 2	56. 45	5. 35	·1245					
4. 18	55. 10	6. 20	·1243					
5. 3	53. 10	6. 45	·1246					
7. 19	51. 10	6. 49	·1243					
7. 35	51. 45	7. 2	·1249					
8. 8	49. 0	7. 28	·1237					
9. 5	46. 0	8. 6	·1232					
9. 34	49. 20	8. 35	·1241					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 14		Oct. 14						
h m	° ′ ″	h m		h m		h m	°	°
9. 46	20. 48. 35	9. 11	·1234					
9. 57	51. 0	9. 36	·1243					
10. 3	50. 45	9. 58	·1267					
10. 18	54. 0	10. 23	·1244					
10. 43	48. 20	10. 38	·1254					
11. 1	51. 10	10. 57	·1243					
11. 22	47. 40	11. 54	·1246					
11. 31	48. 20	12. 4	·1238					
11. 38	48. 10	12. 17	·1243					
11. 49	49. 10	12. 33	·1237					
12. 22	47. 50	12. 53	·1243					
12. 43	53. 0	13. 0	·1239					
12. 55	53. 10	13. 21	·1240					
13. 22	51. 25	13. 32	·1243					
13. 37	51. 40	13. 55	·1235					
13. 57	55. 35	14. 31	·1242					
14. 37	51. 20	15. 38	·1233					
15. 0	52. 0	15. 46	·1235					
15. 8	51. 45	16. 2	·1232					
15. 23	52. 40	16. 54	·1238					
15. 44	51. 20	17. 46	·1240					
15. 58	52. 0	18. 7	·1246					
16. 29	50. 25		***					
17. 1	51. 20	19. 7	·1240					
17. 27	50. 15	19. 58	·1238					
17. 53	51. 15	20. 17	·1235					
19. 7	50. 25	20. 30	·1235					
19. 52	48. 15	20. 51	·1231					
20. 11	49. 5	21. 10	·1229					
20. 28	49. 10	21. 49	·1228					
21. 24	54. 25	22. 49	·1208					
21. 32	54. 10	23. 11	·1225					
	***	23. 30	·1217					
22. 13	57. 50	23. 59	·1226					
	***							
23. 9	20. 58. 30							
	***							
23. 28	21. 2. 10							
	***							
23. 59	20. 58. 45							
Oct. 15		Oct. 15		Oct. 15		Oct. 15		
0. 0	20. 58. 45	0. 0	·1226	0. 0	·03212	0. 0	67·6	67·0
	***	0. 12	·1231	1. 52	{·03146	1. 0	68·1	67·6
0. 30	21. 1. 50	0. 17	·1227		{·03298	2. 0	68·8	68·0
0. 35	0. 20		***	3. 0	{·03218	3. 0	69·1	68·5
0. 46	2. 10	0. 49	·1227		{·03312	6. 0	66·0	67·3
	***	0. 55	·1234	3. 45	{·03238	9. 0	63·8	64·9
1. 3	1. 0	1. 0	·1227		{·03320	12. 0	61·3	62·0
	***	1. 10	·1224	4. 27	{·03222	18. 0	57·6	58·4
1. 17	3. 0		(†)		{·03308	21. 0	56·5	57·0
1. 27	2. 25	1. 58	·1234	5. 24	{·03264	22. 0	57·4	57·9
1. 55	21. 1. 35	2. 25	·1230		{·03342	23. 0	57·8	58·0
2. 14	20. 59. 0	2. 41	·1237	6. 31	·03306			
3. 0	57. 35	3. 0	·1236	6. 42	·03327			
3. 36	57. 20	3. 46	·1241	8. 42:	·03353			
4. 9	58. 25	4. 15	·1237	11. 13	·03550			
4. 46	56. 0	4. 32	·1230	13. 43	·03428			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 15		Oct. 15		Oct. 15				
h m	° ′ ″	h m		h m		h m	°	°
5. 5:	20. 53. 15	4. 59	·1233	20. 2	·03321			
5. 37	55. 40	5. 15	·1242	22. 11	{·03240			
5. 46	54. 35	5. 46	·1240		{·02792			
5. 59	55. 40	6. 15	·1242	23. 59	·02764			
6. 16	54. 0	6. 33	·1232					
6. 29	51. 35	6. 48	·1272					
6. 44	39. 50	7. 0	·1253					
6. 53	48. 10	7. 20	·1243					
7. 10	51. 25	7. 29	·1251					
7. 24	49. 50	7. 47	·1244					
7. 30	51. 50	8. 21	·1249					
8. 10	53. 40	8. 30	·1254					
9. 30	49. 5	8. 40	·1248					
9. 43	50. 0	8. 56	·1248					
9. 51	49. 20	9. 7	·1252					
10. 3	49. 20	9. 22	·1248					
10. 15	48. 20	9. 39	·1249					
10. 32	48. 15	9. 50	·1259					
10. 44	49. 0	9. 54	·1256					
10. 53	47. 55	10. 5	·1258					
11. 9	48. 40	11. 0	·1244					
11. 38	53. 40	11. 56	·1261					
11. 50	52. 35	12. 32	·1269					
11. 55	53. 10	12. 53	·1270					
12. 10	50. 5	13. 4	·1266					
12. 32:	52. 0	13. 14	·1267					
12. 47	51. 20	14. 0	·1258					
13. 15	53. 0	14. 10	·1261					
13. 23	52. 30	14. 24	·1257					
13. 29	53. 0	14. 48	·1260					
13. 48	50. 40	15. 1	·1258					
14. 22	52. 5	15. 57	·1263					
14. 30	51. 0	16. 9	·1268					
15. 12:	53. 0	16. 30	·1261					
15. 28	51. 10	17. 25	·1258					
16. 4	51. 35	17. 47	·1254					
16. 18	53. 5	18. 7	·1258					
16. 35	52. 50	18. 31	·1256					
17. 15	54. 30	19. 12	·1257					
17. 30	53. 55	19. 21	·1261					
17. 53	54. 40	19. 35	·1257					
18. 16	53. 40	20. 38	·1255					
18. 28	53. 50	21. 24	·1245					
19. 0	52. 0	22. 4	·1243					
19. 8	52. 45	23. 8	·1246					
19. 18	51. 30	23. 46	·1246					
19. 27	51. 30	23. 59	·1251					
19. 57	48. 55							
20. 18	50. 0							
20. 30	49. 50							
21. 0	52. 30							
21. 22	20. 52. 30							
	***							
22. 46	21. 2. 10							
	***							
23. 9	1. 15							
23. 17	4. 0							
23. 30	3. 25							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 15								
h m	° ′ ″	h m		h m		h m	°	°
23. 45	21. 4. 10							
23. 59	3. 10							
Oct. 16		Oct. 16		Oct. 16		Oct. 16		
0. 0	21. 3. 10	0. 0	·1251	0. 0	·02764	0. 0	58 ·8	58 ·9
0. 12	2. 30	0. 23	·1248	0. 37	·02760	1. 0	60 ·3	60 ·1
0. 22	4. 0	1. 3	·1252	0. 52	·02736	2. 0	61 ·6	61 ·9
0. 43	2. 10	1. 55	·1245	1. 13	·02732	3. 0	62 ·4	63 ·1
	***	2. 29	·1255		·02634	9. 0	61 ·0	61 ·0
1. 23	2. 50	2. 59	·1246	2. 52	·02420	21. 0	56 ·5	57 ·0
1. 53	1. 50	3. 25	·1250	3. 6	·02460			
1. 57	2. 50	3. 40	·1245		·02897			
2. 12	2. 50	3. 49	·1247	4. 15	·02738			
2. 27	3. 50	4. 26:	·1243	4. 47	·02817			
2. 38	1. 50	5. 0	·1250	6. 45	·02824			
2. 46	1. 40	5. 45	·1250		·02918			
2. 57	0. 50	6. 7	·1246	7. 56	·02892			
3. 3	21. 1. 15	6. 36	·1247	10. 37	·02950			
	***	6. 48	·1243	12. 25	·03067			
4. 24	20. 59. 45	7. 2	·1248	15. 2	·03258			
4. 37	58. 10	7. 13	·1245	20. 10	·03196			
	***	7. 37	·1243	23. 59	·03067			
5. 20	56. 50	7. 44	·1245					
5. 42	58. 0	7. 59	·1243					
6. 0	57. 25	8. 21	·1247					
6. 43	57. 40	8. 44	·1244					
6. 57	56. 50	9. 4	·1270					
	***	9. 26	·1244					
7. 30	56. 45	10. 8	·1271					
8. 8	52. 55	10. 45	·1257					
8. 27	54. 50	11. 0	·1243					
8. 46	55. 5	11. 23	·1232					
9. 1	51. 25	11. 35	·1246					
9. 12	52. 30	11. 45	·1246					
9. 31	51. 5	12. 2	·1254					
9. 45	51. 40	12. 14	·1247					
10. 0	48. 10	12. 30	·1241					
10. 38	47. 0	12. 33	·1244					
10. 53	45. 15	12. 46	·1235					
11. 7	48. 40	12. 57	·1235					
11. 18	47. 15		***					
11. 29	48. 25	13. 5	·1240					
11. 41	45. 25		***					
11. 45	46. 10	13. 12	·1238					
12. 12	44. 10		***					
12. 56	51. 35	13. 37	·1239					
13. 23	53. 15	13. 54	·1235					
13. 48	51. 10	14. 16	·1242					
14. 22	56. 5		***					
15. 3	53. 40	14. 41	·1242					
15. 24	54. 50	14. 55	·1240					
15. 44	53. 50		***					
	***	16. 22	·1242					
18. 37	51. 55		***					
18. 49	51. 15	18. 34	·1240					
19. 12	51. 45	18. 41	·1238					
19. 30	50. 45	18. 48	·1241					
20. 7	52. 15		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 16		Oct. 16						
h m	° ′ ″	h m		h m		h m	°	°
20. 20	20. 51. 30	19. 14	·1234					
20. 32	52. 45		***					
20. 47	52. 5	19. 51	·1231					
21. 56	54. 20	19. 59	·1233					
22. 27	55. 0	20. 16	·1232					
22. 37	56. 0	20. 22	·1235					
23. 50	57. 35	20. 29	·1232					
23. 53	58. 25	20. 51	·1229					
		21. 20	·1222					
		21. 44	·1224					
		21. 54	·1228					
		22. 2	·1227					
			***					
		23. 53	·1227					
			(†)					
Oct. 17		Oct. 17		Oct. 17		Oct. 17		
0. 0	20. 58. 40		(†)	0. 0	·03067	1. 0	59 ·5	59 ·0
0. 8	20. 58. 25	0. 43	·1223	2. 34	·02888	3. 0	60 ·8	60 ·2
0. 26	21. 1. 0	0. 54	·1227	4. 12	·02670	9. 0	58 ·3	58 ·4
0. 37	21. 0. 0	1. 18	·1212	5 43	·02586	21. 0	51 ·9	52 ·9
0. 47	20. 59. 0		(†)	7. 15	·02678			
0. 53	21. 0. 0	2. 15	·1220	8. 2	·02670			
1. 22	20. 59. 0	2. 27	·1228	9. 18	·02707			
1. 28	57. 45	2. 56	·1233	13. 39	·02900			
	***	3. 4	·1237	17. 51	·03184			
2. 10:	54. 30	3. 41:	·1228	21. 1	·03078			
	***	4. 1	·1231		(†)			
3. 12	58. 35	4. 22	·1215					
3. 27	58. 5	5. 0	·1231					
3. 55	59. 0	5. 3	·1229					
3. 59	57. 30	5. 12	·1234					
4. 3	57. 25	5. 22	·1236					
4. 8	54. 30	5. 26	·1230					
4. 14	54. 30	5. 53	·1228					
4. 26	51. 55	6. 4	·1231					
4. 35	51. 20	6. 24	·1228					
4. 57	48. 25	6. 45	·1230					
5. 16	53. 0	7. 5	·1225					
5. 25	52. 45	7. 20	·1251					
5. 41	54. 40	8. 2	·1233					
6. 8	55. 55	8. 30	·1237					
6. 22	55. 30	8. 45	·1230					
6. 42	56. 40	9. 38	·1237					
7. 12:	50. 35	9. 49	·1236					
7. 24	53. 40		***					
7. 50	55. 10	10. 26	·1243					
8. 4	54. 30	10. 39	·1239					
8. 13	55. 10		***					
8. 23	54. 40	12. 5	·1238					
8. 45	56. 20		***					
9. 30	55. 0	12. 19	·1243					
9. 46	55. 15	12. 41	·1243					
10. 0	54. 10	12. 54	·1240					
10. 33	54. 15	13. 0	·1243					
10. 57	55. 50	13. 31	·1236					
11. 12	55. 25	13. 40	·1238					
11. 20	56. 0	13. 54	·1238					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 17		Oct. 17						
h m	o ′ ″	h m		h m		h m	°	°
11. 30	20. 55. 25	14. 2	·1243					
11. 48	56. 50	14. 7	·1239					
12. 18	53. 35		***					
12. 37	54. 25	16. 2	·1240					
12. 52	58. 40		***					
13. 31	55. 20	16. 50	·1247					
13. 45	56. 10	17. 16	·1242					
14. 19	53. 55	18. 9	·1242					
14. 31	54. 10	18. 26	·1238					
15. 0	53. 10	19. 50	·1240					
15. 5	54. 15	20. 15	·1236					
15. 26	53. 30	20. 20	·1238					
15. 35	55. 0	20. 35	·1234					
15. 45	54. 0	22. 16	·1222					
15. 58	54. 55	22. 25	·1226					
16. 15	54. 0	22. 37	·1223					
16. 19	54. 30		***					
16. 25	54. 20	23. 17	·1227					
16. 31	55. 25	23. 50	·1225					
17. 9	53. 10	23. 59	·1225					
17. 40	53. 55							
	***							
18. 39	54. 30							
	***							
19. 46	52. 25							
21. 7	52. 5							
21. 19	52. 50							
22. 12	53. 0							
22. 24	55. 5							
22. 33	54. 0							
	***							
22. 53	55. 30							
23. 0	54. 0							
23. 4	55. 10							
23. 8	54. 35							
23. 15	56. 0							
23. 31	56. 0							
23. 38	56. 50							
23. 53	55. 20							
23. 59	55. 50							
Oct. 18		Oct. 18		Oct. 18		Oct. 18		
0. 0	20. 55. 45	0. 0	·1225		(†)	1. 0	54 ·2	54 ·1
0. 59	56. 50	0. 29	·1228	1. 0	·02673*	3. 0	55 ·9	55 ·2
1. 55	55. 20		(†)	3. 0	·02562*	9. 0	53 ·0	54 ·3
2. 0	55. 55	1. 0	·1228*	9. 0	·02364*	21. 0	47 ·0	48 ·1
2. 10	55. 10	3. 0	·1229*	21. 0	·02554*			
2. 15	55. 55	9. 0	·1238*	23. 8	·02197			
3. 27	54. 10	21. 0	·1231*	23. 59	·02210			
3. 38	54. 35							
4. 43	54. 55							
5. 13	56. 50							
5. 37	54. 45							
5. 52	55. 5							
6. 4	54. 30							
7. 22	55. 10							
8. 22	53. 30							
9. 0	53. 40							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 18								
h m	o ′ ″	h m		h m		h m	°	°
9. 53	20. 53. 10							
10. 5	52. 0							
10. 53	52. 15							
11. 15	49. 30							
11. 31	51. 5							
11. 44	50. 30							
12. 3	51. 35							
12. 26	49. 0							
12. 55	51. 0							
13. 12	54. 0							
14. 16	52. 0							
14. 33	53. 0							
15. 0	52. 20							
15. 8	53. 25							
15. 46	52. 30							
16. 4	53. 0							
16. 29	51. 35							
17. 12	53. 40							
17. 25	52. 40							
18. 39	52. 25							
18. 50	51. 50							
19. 45	51. 40							
20. 24	50. 0							
21. 0	51. 20							
	(†)							
22. 0	55. 5							
22. 25	57. 0							
22. 18	57. 25							
22. 57	59. 0							
23. 14	59. 20							
23. 28	58. 5							
23. 52	57. 55							
23. 59	58. 5							
Oct. 19		Oct. 19		Oct. 19		Oct. 19		
0. 0	20. 58. 0		(†)	0. 0	·02210	9. 0	53 ·3	54 ·0
0. 12	58. 30	4. 58	·1238	0. 45	·02166	21. 0	53 ·0	54 ·6
0. 46	57. 55	5. 9	·1235		(†)			
1. 17	58. 10	6. 7	·1240	4. 32	·02062			
1. 53	57. 15	6. 34	·1239	8. 9	·01930			
3. 0	56. 40	7. 8	·1243	9. 36	·01895			
3. 25	57. 0	7. 20	·1238	10. 47	·01900			
4. 42	52. 50	8. 8	·1240	12. 21	·01842			
4. 50	53. 5	8. 47	·1243	15. 8	·01977			
5. 5	52. 30	8. 55	·1243	16. 15	·02068			
5. 37	52. 30	9. 10	·1239	18. 41	·02135			
6. 0	53. 10	9. 31	·1249	20. 47	·02156			
9. 0	52. 50	10. 0	·1239	21. 23	·02177			
9. 32	46. 10	10. 21	·1238	22. 26	·02190			
10. 8	50. 0	10. 36	·1234		(†)			
10. 45	51. 40	11. 1	·1241					
11. 10	50. 0	11. 20	·1239					
11. 46	52. 0	11. 54	·1235					
12. 35	52. 30	12. 11	·1236					
12. 52	51. 55	13. 35	·1231					
13. 5	52. 20	14. 46	·1231					
14. 41	51. 55	15. 14	·1228					
15. 23	50. 20	16. 9	·1226					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

October 18. The Photographic Traces for the Horizontal Force and Vertical Force Magnets were too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 19		Oct. 19						
h m	° ′ ″	h m		h m		h m	°	°
16. 30	20. 50. 10	16. 25	·1228					
17. 31	52. 25	16. 40	·1228					
20. 24	48. 20	16. 59	·1226					
21. 6	49. 50	17. 10	·1228					
23. 59	56. 0	17. 23	·1224					
		18. 0	·1228					
		18. 23	·1232					
		19. 56	·1228					
		20. 18	·1225					
		20. 53	·1218					
		22. 15	·1223					
			(†)					
Oct. 20		Oct. 20		Oct. 20		Oct. 20		
0. 0	20. 56. 0		(†)		(†)	1. 0	55·5	56·1
0. 9	57. 10	1. 23	·1120*	1. 0	·02168*	3. 0	56·7	57·5
0. 46	55. 50	1. 44	·1134	2. 1	·02422	9. 0	53·7	56·0
1. 0	56. 30	2. 10	·1142	3. 21	·02500	21. 0	48·6	50·8
1. 55	56. 50	3. 49	·1141	6. 31	·02782			
2. 23	56. 0	4. 0	·1142	9. 13	·02874			
3. 50	55. 10	5. 10	·1142	16. 0	·03150			
5. 14	55. 25	5. 47	·1144	21. 40	·03376			
5. 37	54. 50	6. 49	·1142	23. 51	·03297			
8. 0	54. 10	7. 1	·1144		(†)			
8. 36	53. 0	8. 47	·1143					
8. 43	52. 30	9. 6	·1144					
8. 52	52. 40	9. 19	·1147					
9. 16	51. 35	10. 14	·1143					
9. 40	52. 45	10. 50	·1142					
10. 44	53. 25	11. 40	·1145					
11. 25	52. 50	11. 59	·1148					
11. 38	53. 0	13. 38	·1142					
11. 52	52. 20		(†)					
12. 4	52. 50	21. 0	·1140*					
13. 3	52. 30							
13. 37	51. 40							
14. 22	54. 30							
14. 58	54. 0							
15. 27	54. 15							
15. 44	53. 25							
16. 45	53. 50							
18. 41	52. 45							
21. 6	50. 0							
22. 8	52. 20							
	(†)							
Oct. 21		Oct. 21		Oct. 21		Oct. 21		
	(†)		(†)		(†)	1. 0	51·6	52·9
0. 37	20. 56. 0	0. 52	·1138	1. 0	·03264*	3. 0	54·1	55·2
0. 53	57. 45	0. 57	·1144	1. 9	·02642	9. 0	55·0	56·5
1. 2	57. 10	1. 5	·1144	2. 2	·02617	21. 0	55·9	56·7
1. 25	57. 50	1. 11	·1136	2. 57	·02458	22. 0	56·4	56·9
1. 50	56. 45	1. 39	·1144		·02732	23. 0	57·0	57·3
2. 38	55. 15	2. 2	·1146	4. 8	·02618			
5. 23	56. 25	2. 8	·1155	5. 58	·02815			
6. 12	57. 50		(†)	11. 50	·02928			
6. 45	57. 15	3. 0	·1146*	19. 59	·03098			
6. 59	57. 30	3. 12	·1149	21. 13	·03092			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 21		Oct. 21		Oct. 21				
h m	° ′ ″	h m		h m		h m	°	°
7. 0	20. 58. 20	4. 13	·1156	21. 54	·03120			
7. 12	57. 50	4. 48:	·1152	22. 12	·03184			
7. 18	57. 10	5. 20	·1158	22. 20	·03160			
7. 38	57. 0	5. 49	·1154		***			
7. 52	57. 25	5. 59	·1155	22. 48	·03247			
8. 14	53. 30	6. 28	·1150	23. 23	·03266			
8. 23	53. 20	8. 0	·1147	23. 27	·03257			
8. 45	46. 10	8. 28	·1136	23. 59	·03272			
8. 52	47. 0	8. 47	·1144					
9. 21	42. 0	8. 58	·1155					
9. 40	44. 10	9. 17	·1141					
10. 0	43. 5	9. 23	·1145					
10. 15	44. 20	9. 31	·1144					
10. 27	44. 0	9. 41	·1138					
10. 38	45. 10	9. 47	·1143					
11. 0	44. 0	9. 59	·1145					
11. 33	45. 15	10. 20	·1130					
11. 55	47. 35	10. 34	·1133					
12. 2	47. 50	11. 14	·1134					
12. 12	48. 30	11. 37	·1127					
12. 35	48. 40	12. 7	·1135					
12. 42	48. 15	12. 38	·1131					
13. 8	50. 0	12. 57	·1135					
13. 27	50. 20	13. 37	·1137					
13. 46	49. 25	14. 3	·1131					
14. 5	49. 40	14. 29	·1131					
14. 34:	52. 15	14. 51	·1141					
15. 15	47. 40	15. 1	·1139					
15. 39	47. 30	15. 30	·1144					
15. 42	49. 10	15. 41	·1140					
15. 51	48. 50	15. 45	·1147					
16. 0	50. 0	15. 53	·1143					
16. 5	49. 10	16. 1	·1144					
16. 14	50. 40	16. 7	·1138					
16. 22	50. 35	16. 13	·1147					
16. 28	51. 20	16. 18	·1142					
17. 16	53. 15	16. 29	·1147					
17. 37	51. 40	16. 36	·1143					
17. 45	52. 25	16. 46	·1149					
18. 1	51. 35	17. 2	·1145					
18. 9	52. 15	17. 31	·1143					
18. 14	52. 5	17. 51	·1151					
18. 22	52. 40	18. 4	·1146					
18. 40	50. 45	18. 8	·1150					
	***	18. 16	·1143					
19. 30	51. 55	18. 22	·1146					
19. 45	51. 20	18. 30	·1143					
19. 57	20. 56. 5		***					
20. 30	21. 0. 30	18. 54	·1152					
20. 52	20. 59. 0		***					
21. 18	54. 5	19. 34	·1147					
21. 26	56. 5		***					
21. 30	55. 20	21. 2	·1111					
21. 34	56. 5	21. 23	·1104					
21. 40	55. 10	21. 32	·1113					
21. 47	59. 50	21. 46	·1099					
21. 57	20. 59. 0	21. 58	·1115					
22. 0	21. 0. 35	22. 3	·1100					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

HORIZONTAL FORCE.—October 20. The numbers in the series beginning this day are smaller by 0·01, nearly, than those of the series ending October 19.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 21		Oct. 21						
h m	° ′ ″	h m		h m		h m	°	°
22. 8	20. 59. 10	22. 18	·1103					
22. 15	21. 5. 55	22. 27	·1131					
22. 22	4. 0	22. 37	·1105					
22. 28	5. 30	22. 47	·1132					
22. 34	11. 30	22 50	·1111					
22. 39	8. 30	22. 57	·1111					
22. 45	6. 50	23. 2	·1102					
22. 59	1. 40	23. 3	·1107					
23. 0	3. 0	23. 10	·1100					
23. 8	1. 45	23. 14	·1106					
23. 15	1. 25	23. 31	·1104					
23. 24	4. 15	23. 35	·1112					
23. 31	1. 0	23. 43	·1098					
23. 45	2. 55	23. 54	·1110					
	(†)	23. 59	·1107					
Oct. 22		Oct. 22		Oct. 22		Oct. 22		
	(†)	0. 0	·1107	0. 0	·03272	0. 0	57·9	58·1
0. 22	20. 58. 25	0. 41	·1100	0. 50	·03226	1. 0	58·7	58·8
0. 40:	21. 0. 0	0. 58	·1113	1. 21	·03292	2. 0	59·7	59·9
0. 52	20. 58. 5	1. 13	·1109	2. 17	·03236	3. 0	60·7	61·1
1. 0	21. 0. 0	1. 17	·1103	3. 20	·03222	6. 0	60·9	61·8
1. 13	20. 56. 35	1. 22	·1104	3. 28	·03325	9. 0	59·6	60·9
1. 23	21. 1. 35	1. 32	·1108	3. 41	·03260	12. 0	57·8	60·2
1. 30	20. 56. 10	1. 47	·1117	4. 3	·03383	18. 0	54·0	56·1
1. 42	54. 45	1. 57	·1103	4. 40	·03290	21. 0	53·5	55·1
1. 43	56. 10	2. 2	·1117	4. 58	·03304	22. 0	53·7	55·0
1. 52	54. 30	2. 5	·1114	5. 48	·03178	23. 0	54·4	55·0
1. 57	56. 0	2. 14	·1126	5. 53	·03220			
2. 13	51. 10	2. 19	·1117	6. 32	·03176			
2. 18	56. 30	2. 22	·1126	6. 37	·03278			
2. 30	52. 45	2. 25	·1115	7. 0	·03204			
2. 35	57. 45	2. 39	·1112	7. 31	·03182			
2. 48	55. 20	2. 45	·1126	7. 39	·03243			
2. 56	59. 5	2. 48	·1110	8. 16	·03218			
3. 10	20. 49. 0	2. 52	·1123	8. 29	·03277			
3. 15	21. 0. 5	2. 55	·1116	9. 47	·03200			
3. 40	20. 45. 15	3. 0	·1120	10. 31	·03062			
3. 41	53. 25	3. 4	·1109	10. 49	·03131			
3. 48	50. 40	3. 23	·1129	11. 6	·03150			
3. 57	56. 40	3. 31	·1120	11. 17	·03242			
4. 2	45. 30	3. 34	·1123	11. 45	·03195			
4. 7	47. 15	3. 37	·1120	12. 1	·03177			
4. 19	34. 30	3. 40	·1126	12. 16	·03216			
4. 25	38. 10		(†)	12. 28	·03218			
4. 26	34. 40	3. 57	·1102	12. 39	·03196			
4. 27	37. 5	4. 0	·1095	13. 12	·03255			
4. 33	35. 25	4. 16	·1194	14. 12	·03302			
4. 38	40. 35	4. 18	·1108	17. 2	·03463			
4. 39	40. 0	4. 33	·1152	18. 1	·03426			
4. 46	51. 50	4. 39	·1116	18. 38	·03457			
4. 53	48. 45	4. 47	·1126	19. 4	·03448			
4. 54	53. 35	4. 57	·1104		·03155			
5. 0	49. 10	5. 3	·1116	21. 17	·03226			
5. 7	54. 0	5. 11	·1100	22. 10	·03297			
5. 14	49. 25	5. 22	·1113	23. 59	·03336			
5. 15	51. 15	5. 32	·1085					
5. 20	49. 10	5. 45	·1097					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 22		Oct. 22						
h m	° ′ ″	h m		h m		h m	°	°
5. 25	20. 50. 35	5. 52	·1089					
5. 32	48. 25	6. 28	·1113					
5. 42	51. 20	6. 41	·1090					
6. 7	48. 50	7. 6	·1116					
6. 24	37. 25	7. 15	·1087					
6. 57	45. 10	7. 32	·1105					
7. 7	42. 40	7. 41	·1093					
7. 16	42. 50	8. 7	·1112					
7. 42	35. 0		(†)					
7. 52	39. 0	9. 0	·1098*					
7. 57	40. 20	9. 49	·1100					
8. 8	46. 30	10. 6	·1081					
8. 14	45. 35	10. 15	·1085					
8. 24	48. 0	10. 21	·1062					
8. 40	43. 15	10. 37	·1089					
8. 52	44. 0	10. 46	·1081					
9. 3	40. 0	10. 56	·1099					
9. 18	42. 30		(†)					
9. 30	38. 30	11. 37	·1126					
9. 37	39. 30	11. 49	·1083					
9. 46	38. 30	12. 6	·1109					
9. 52	39. 25	12. 22	·1092					
10. 1	47. 0	12. 38	·1126					
10. 7	45. 40	12. 55	·1116					
10. 11	47. 20	13. 30	·1134					
10. 19	44. 45	13. 56	·1127					
10. 23	46. 10	14. 8	·1129					
10. 40	38. 10	14. 18	·1125					
10. 45	38. 5	14. 24	·1133					
11. 0	29. 30	14. 30	·1122					
11. 25	43. 20	15. 3	·1118					
11. 33	43. 50	16. 39	·1110					
11. 45	49. 30	17. 0	·1122					
11. 57	46. 5	17. 5	·1122					
12. 20	55. 0	17. 24	·1136					
12. 46	51. 45	17. 40	·1133					
12. 53	52. 20	17. 53	·1133					
13. 1	51. 25	18. 8	·1127					
	***	18. 19	·1114					
13. 23	51. 0	18. 31	·1129					
13. 26	51. 30	18. 43	·1124					
14. 22	44. 40	19. 3	·1128					
14. 28	47. 10	20. 0	·1103					
14. 33	46. 20	20. 30	·1115					
14. 53	48. 30	21. 2	·1109					
14. 57	48. 0	21. 15	·1094					
15. 35	49. 30	21. 24	·1110					
15. 55	48. 15	21. 45	·1103					
16. 11	49. 10	21. 53	·1108					
16. 19	51. 30	22. 20	·1105					
16. 48	55. 25	22. 30	·1110					
17. 0	56. 10	22. 36	·1107					
17. 15:	55. 40	22. 59	·1104					
17. 26	57. 20	23. 9	·1111					
17. 36	56. 5	23. 59	·1120					
17. 38	56. 30							
17. 50	54. 55							
18. 6	51. 20							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 22								
h m	° ′ ″	h m		h m		h m	°	°
18. 17	20. 51. 0							
18. 29	47. 45							
18. 41	49. 20							
19. 1	50. 30							
19. 3	49. 40							
19. 8	51. 55							
19. 23	50. 5							
19. 43	50. 15							
19. 49	52. 5							
19. 58	51. 0							
20. 15	48. 55							
20. 24	49. 0							
20. 29	48. 20							
20. 52	50. 0							
20. 57	49. 30							
21. 6	51. 0							
21. 26	48. 30							
21. 29	51. 10							
21. 50	49. 45							
22. 17	54. 30							
22. 25	54. 40							
22. 30	57. 50							
22. 40	56. 35							
22. 50	58. 35							
23. 13	58. 15							
23. 16	59. 5							
23. 40	56. 5							
23. 49	56. 20							
23. 59	58. 30							
Oct. 23		Oct. 23		Oct. 23		Oct. 23		
0. 0	20. 58. 40	0. 0	·1120	0. 0	·03336	0. 0	55 ·5	56 ·0
0. 15	59. 30	0. 33	·1116	0. 58	·03274	1. 0	56 ·1	56 ·6
0. 37	56. 0	0. 45	·1116		·03043	2. 0	57 ·0	57 ·2
1. 0	57. 30	0. 57	·1123	3. 34	·02996	3. 0	57 ·9	57 ·9
1. 11:	59. 30	1. 8	·1123	4. 4	·02935	9. 0	56 ·9	58 ·0
1. 23	57. 30	1. 15	·1128	4. 39	·02912	21. 0	48 ·5	52 ·1
1. 36	58. 5	1. 29	·1127	5. 18	·02915			
1. 49	56. 0	1. 38	·1111		·03007			
	(†)	1. 47	·1111	7. 15	·02926			
3. 0	50. 50	1. 48	·1119		·03000			
3. 23	52. 0	2. 1	·1119	9. 1	·02943			
3. 39	49. 0	2. 9	·1126	10. 0	·02838			
3. 50	49. 20		(†)	12. 22	·02874			
3. 57	46. 20	3. 0	·1130*	13. 4	·02865			
4. 7	47. 10	3. 16	·1131	14. 26	·02958			
4. 12	44. 35	3. 45	·1111	14. 58	·03017			
4. 30	43. 25	3. 56	·1117	18. 7	·03205			
5. 25:	50. 55	4. 4	·1113	19. 2	·03277			
5. 57	45. 30	4. 17	·1125	22. 44	·03130			
6. 16	47. 10	4. 25	·1121		·03040			
6. 37	46. 30	4. 51	·1142	23. 59	·03038			
7. 3	49. 0	5. 12	·1128					
7. 22	46. 10	5. 20	·1127					
7. 49	48. 0	5. 37	·1116					
8. 15	43. 15	5. 58	·1117					
8. 25	43. 30	6. 18	·1130					
8. 31	43. 0	6. 55	·1125					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 23		Oct. 23						
h m	° ′ ″	h m		h m		h m	°	°
8. 42	20. 44. 45	7. 20	·1132					
9. 0	46. 50	7. 27	·1126					
9. 20	51. 55	7. 44	·1126					
9. 27	48. 50	7. 53	·1131					
9. 35	48. 40	8. 0	·1128					
9. 42	49. 30	8. 13	·1127					
9. 45	52. 20	8. 37	·1139					
9. 55	53. 0	8. 49	·1132					
10. 7	48. 0	9. 0	·1144					
10. 15	48. 10	9. 17	·1130					
10. 35	46. 10	9. 23	·1140					
10. 44	46. 0	9. 31	·1138					
10. 57	43. 45	9. 43	·1143					
11. 16	47. 20	9. 55	·1140					
11. 30	47. 15	10. 7	·1148					
11. 48	45. 30	10. 26	·1136					
11. 57	46. 25	10. 43	·1141					
12. 10	45. 10	11. 0	·1142					
12. 27	48. 10	11. 15	·1135					
12. 38	46. 10	11. 33	·1132					
12. 49	48. 20	11. 54	·1134					
13. 5	48. 45	12. 6	·1130					
13. 11	52. 10	12. 20	·1138					
13. 28	50. 30	12. 46	·1145					
13. 50	49. 0	13. 7	·1136					
14. 15:	46. 30	13. 32	·1143					
14. 45	48. 40	13. 44	·1142					
14. 58	48. 15	13. 59	·1145					
15. 32	48. 30	14. 14	·1141					
15. 55	47. 30	14. 43	·1138					
16. 16	49. 25	15. 39	·1141					
16. 31	49. 0	15. 50	·1140					
17. 22	53. 5	16. 14	·1145					
17. 37	51. 25	16. 26	·1144					
17. 46	50. 50	16. 40	·1146					
17. 52	51. 0	16. 52	·1140					
18. 5	49. 30	17. 17	·1129					
18. 27	50. 0	17. 30	·1133					
18. 38	50. 0	17. 34	·1133					
19. 11	50. 5		***					
19. 32	51. 35	18. 1	·1140					
20. 15:	49. 0		***					
20. 31	50. 0	18. 40	·1136					
21. 1	49. 20	18. 45	·1141					
	***	18. 51	·1138					
22. 46	57. 25		***					
23. 5	56. 30	19. 42	·1141					
23. 45	57. 0		***					
23. 59	58. 30	20. 4	·1133					
			***					
		20. 40	·1131					
		20. 59	·1129					
		21. 39	·1130					
		21. 51	·1126					
		21. 59	·1131					
		22. 5	·1128					
		22. 20	·1134					
		22. 37	·1130					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Oct. 24	
0. 0	20. 58. 30
0. 8	57. 40
0. 29	57. 0
0. 43	56. 25
0. 53	57. 0
1. 7	56. 0
1. 28	57. 25
2. 6	53. 10
2. 10	52. 20
2. 23	52. 30
2. 27	51. 20
2. 34	52. 0
2. 39	51. 30
2. 45	52. 0
2. 50	50. 30
2. 59	51. 30
3. 14	50. 0
3. 23	50. 30
3. 29	51. 40
3. 33	51. 30
3. 46	52. 30
4. 0	52. 0
4. 15	52. 40
5. 15	50. 50
5. 40	51. 20
5. 46	50. 50
5. 59	51. 50
	***
7. 29	51. 50
8. 22	50. 20
8. 33	50. 50
8. 55	49. 0
9. 0	50. 40
9. 15	50. 20
9. 56	50. 50
10. 7	51. 30
10. 47:	50. 0
11. 30	51. 40
12. 7	50. 30
12. 28	50. 50
12. 43	49. 30
13. 19	56. 55
13. 48	53. 25
13. 54	54. 0
14. 16	50. 40
14. 48	49. 30
15. 23	50. 30
15. 43	51. 30
16. 21	50. 30
17. 0	51. 0
17. 18	50. 30
18. 30	50. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 23	
h m	
22. 49	·1135
23. 21	·1128
23. 45	·1130
23. 59	·1134
Oct. 24	
0. 0	·1134
0. 5	·1135
0. 28	·1134
0. 30	·1130
1. 16	·1136
1. 37	·1129
2. 10	·1126
2. 29	·1131
2. 32	·1126
2. 43	·1138
3. 2	·1137
3. 17	·1128
3. 28	·1130
3. 43	·1127
3. 51	·1131
4. 4	·1129
4. 19	·1133
4. 50	·1134
5. 5	·1136
5. 40	·1137
6. 28	·1135
6. 52	·1138
7. 22	·1134
7. 39	·1135
8. 14	·1133
8. 37	·1135
9. 35	·1131
10. 3	·1139
10. 35	·1137
11. 7:	·1132
11. 37	·1134
12. 1	·1133
12. 21	·1135
12. 30	·1133
12. 45	·1136
13. 7	·1132
13. 45	·1151
14. 38	·1139
15. 54	·1146
16. 43	·1144
17. 41	·1149
18. 25	·1145
19. 1	·1144
19. 38	·1131
21. 29	·1132
22. 14	·1127
22. 48	·1125
22. 58	·1130
23. 3	·1127
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Oct. 24	
0. 0	·03038
0. 31	·02995
	(†)
2. 7	·02312
3. 39	·02305
6. 31:	·02504
9. 13	·02535
10. 2	{·02576 ·02648
10. 41	·02662
13. 0	·02777
14. 1	·02824
18. 7	·03182
22. 48	·02764
23. 59	·02763

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Oct. 24		
1. 0	52 ·5	54 ·0
3. 0	54 ·9	55 ·8
9. 0	53 ·9	55 ·2
21. 0	45 ·0	46 ·9

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Oct. 24	
19. 15	20. 48. 35
19. 42	49. 10
19. 57	48. 15
20. 30	48. 20
20. 37	48. 50
20. 55	48. 10
21. 10	49. 10
21. 21	47. 55
22. 21	51. 30
22. 33	51. 25
22. 49	53. 35
23. 9	54. 40
23. 18	56. 25
23. 59	53. 50
Oct. 25	
0. 0	20. 53. 35
0. 14	54. 40
0. 27	53. 50
0. 40	54. 35
1. 33	52. 0
2. 28	53. 20
2. 46	52. 20
3. 2	53. 5
3. 31	52. 30
4. 13	52. 20
4. 33	51. 0
4. 40	50. 0
4. 50	49. 50
5. 8	48. 15
5. 27	50. 30
5. 50	42. 5
6. 22	49. 40
6. 35	49. 30
6. 44	49. 40
7. 7	49. 0
7. 18	49. 25
8. 45	48. 25
9. 7	46. 0
9. 15	43. 30
9. 27	45. 20
10. 6	43. 35
10. 18	44. 20
10. 34	44. 0
10. 56	46. 0
11. 9	46. 10
11. 28	44. 0
11. 45	43. 35
12. 34	48. 10
12. 58	48. 50
13. 30:	48. 0
13. 52	53. 30
14. 5	54. 50
14. 44	48. 30
15. 25	48. 0
16. 20	50. 0
16. 52	48. 10
18. 16	55. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 25	
h m	
	(†)
1. 0	·1140*
1. 28	·1138
1. 48	·1136
2. 26	·1143
2. 39	·1138
3. 15	·1145
3. 30	·1138
4. 22	·1141
4. 39	·1135
4. 44	·1136
5. 3	·1127
5. 29:	·1137
5. 36	·1132
6. 3	·1156
6. 31	·1135
7. 1	·1134
7. 31	·1140
7. 43	·1139
7. 56	·1141
8. 35	·1137
9. 4	·1138
9. 17	·1157
9. 54:	·1143
10. 8	·1143
10. 30	·1137
10. 38	·1140
10. 59	·1133
11. 13	·1139
12. 9:	·1129
12. 38	·1133
12. 59	·1131
13. 8	·1133
13. 30	·1129
14. 15	·1141
14. 45	·1135
15. 17	·1139
15. 32	·1137
15. 50	·1139
16. 17	·1135
16. 56	·1143
17. 19	·1138

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Oct. 25	
0. 0	·02763
0. 49	·02756
1. 16	·02700
5. 33	·02317
9. 26	·02124
10. 57	·02204
14. 7	·02275
14. 46	02257
16. 38	·02320
18. 36	·02332
20. 32	·02360
21. 43	·02350
21. 47	·02368
23. 59	·02444

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Oct. 25		
1. 0	49 ·0	50 ·2
3. 0	52 ·2	53 ·0
9. 0	55 ·9	56 ·0
22. 7	57 ·8	58 ·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 25		Oct. 25						
h m	° ′ ″	h m		h m		h m	°	°
18. 38	20. 53. 0	17. 43	·1136					
19. 8	51. 10	18. 15	·1137					
19. 22	49. 10	18. 42	·1133					
19. 34	48. 10	19. 8	·1135					
19. 39	48. 20	19. 49	·1128					
19. 50	47. 25	19. 58	·1124					
20. 0	47. 35	20. 4	·1126					
20. 18	46. 10	20. 17	·1123					
20. 32	47. 30	20. 22	·1125					
21. 18	47. 20	20. 27	·1123					
21. 49	49. 40	20. 36	·1126					
22. 2	48. 35	21. 15	·1114					
22. 7	49. 0	21. 38	·1108					
22. 15	48. 25		(†)					
23. 22	52. 0	23. 0	·1106					
23. 59	52. 10	23. 29	·1110					
		23. 59	·1110					
Oct. 26		Oct. 26		Oct. 26		Oct. 26		
0. 0	20. 52. 10	0. 0	·1110	0. 0	·02442	8. 30	57 ·0	59 ·0
0. 8	51. 40	0. 13	·1110	1. 22	·02520	21. 0	51 ·0	52 ·8
0. 33	53. 10	0. 42	·1116	2. 54	·02695			
0. 45	52. 35	0. 48	·1115	3. 55	·02762			
1. 15	54. 50	1. 1	·1120	4. 12	·02740			
1. 33	54. 0	1. 23	·1119	4. 37	·02784			
2. 0	54. 10	1. 43	·1120	5. 50	·02795			
2. 48	52. 50	2. 9:	·1117	6. 2	·02780			
3. 0	53. 25	2. 59	·1134	6. 7	·02798			
4. 48	50. 20	3. 22	·1129	7. 0	{·02815			
5. 23:	45. 0	4. 29	·1135		{·02957			
5. 57	49. 0	5. 16:	·1127	9. 34	·02942			
6. 30	48. 0	5. 55	·1140	9. 47	·02920			
6. 57	50. 0	6. 3	·1132	10. 24	·02923			
7. 28	50. 0	6. 30	·1131	14. 6	·03132			
8. 30	46. 50		(†)	18. 37	·03466			
8. 57	48. 15	7. 28	·1135	21. 4	{·03264			
9. 28	46. 20	8. 31	·1135		{·02396			
9. 42	48. 0	8. 52	·1138	23. 59	·02437			
10. 3:	41. 10	9. 6	·1135					
10. 27	44. 20	9. 28	·1148					
11. 11	46. 10	9. 37	·1162					
11. 37	48. 0	9. 47	·1152					
12. 14	47. 55	9. 54	·1157					
14. 23	49. 35	10. 9	·1155					
15. 3	53. 5	10. 32	·1136					
15. 32	51. 50	11. 46	·1143					
15. 46	51. 40	11. 58	·1142					
16. 30	49. 25	12. 49	·1146					
20. 35	46. 30	13. 26	·1146					
22. 40	49. 0	14. 3	·1150					
23. 59	49. 40	14. 12	·1148					
		14. 59	·1146					
		15. 19	·1150					
		15. 32	·1147					
		16. 57	·1147					
		17. 25	·1145					
		18. 50	·1146					
		21. 18	·1134					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Oct. 26						
h m	° ′ ″	h m		h m		h m	°	°
		23. 1	·1129					
		23. 59	·1134					
Oct. 27		Oct. 27		Oct. 27		Oct. 27		
0. 0	20. 49. 40	0. 0	·1134	0. 0	·02437	1. 0	54 ·0	54 ·9
0. 27	51. 35	0. 15	·1137	2. 30	·02416	3. 0	55 ·9	56 ·5
1. 40	50. 40	0. 50	·1131	6. 6	·02097	9. 0	59 ·4	59 ·0
1. 53	49. 30	1. 30	·1130	8. 37	·02226	21. 0	57 ·3	58 ·9
2. 16	48. 45	1. 47	·1139	11. 30	·02290			
3. 32	48. 10	2. 9	·1135	12. 16	·02274			
4. 25	48. 10	3. 25	·1144	14. 43	·02284			
4. 30	48. 35	4. 0	·1145	16. 59	·02330			
4. 44	47. 35	4. 47	·1154	18. 50	·02335			
5. 23	47. 50	5. 19	·1147	20. 31	·02358			
5. 35	48. 30	5. 47	·1144	22. 47	·02356			
6. 2	47. 50	6. 1	·1146	23. 59	·02380			
6. 12	46. 0	6. 20	·1133					
6. 30	47. 35	6. 41	·1141					
6. 57	45. 20	6. 57	·1138					
7. 15	47. 45	7. 16	·1144					
8. 30	48. 0	7. 32	·1141					
9. 18	48. 45	7. 48	·1142					
10. 10	46. 0	8. 2	·1140					
10. 20	44. 30	8. 45	·1140					
11. 0	44. 40	9. 15	·1139					
11. 21	44. 0	9. 41	·1138					
11. 37	44. 45	10. 8	·1132					
	***		(†)					
12. 26	44. 30	11. 37	·1137					
12. 46	46. 45	12. 2	·1150					
15. 20	48. 45	12. 15	·1144					
15. 41	48. 5		(†)					
15. 59	48. 25	14. 3	·1139					
18. 56	47. 20	15. 47	·1137					
19. 26	46. 25	17. 37	·1141					
20. 26	46. 0	18. 30	·1140					
20. 55	46. 50	19. 17	·1141					
21. 40	48. 0	22. 7	·1129					
21. 47	47. 30	22. 24	·1131					
23. 8	51. 0	23. 9	·1132					
23. 15	53. 5		(†)					
23. 27	53. 35							
23. 33	52. 55							
23. 46	53. 35							
23. 59	55. 0							
Oct. 28		Oct. 28		Oct. 28		Oct. 28		
0. 0	20. 55. 0		(†)	0. 0	·02380	1. 0	57 ·0	58 ·2
0. 7	53. 20	1. 0	·1138*	3. 8	·02395	3. 0	57 ·0	58 ·3
0. 26	51. 40	1. 27	·1136	5. 45	·02376	9. 0	55 ·4	57 ·7
0. 48	51. 40	2. 34	·1137	6. 17	·02390	21. 0	51 ·0	54 ·5
1. 8	50. 30	3. 45	·1136	11. 15	·02420	22. 0	51 ·5	54 ·1
1. 44	51. 55	5. 12	·1146	16. 12	·02576	23. 0	51 ·8	54 ·2
2. 4	50. 0	5. 29	·1144	22. 14	·02808			
3. 2	49. 55	6. 1	·1144	23. 59	·02843			
3. 28	50. 40	6. 13	·1152					
3. 43	50. 15	6. 20	·1153					
5. 3	49. 55	6. 31	·1148					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 31		Oct. 31		Oct. 31				
h m	° ′ ″	h m		h m		h m	°	°
2. 8	20. 54. 0	1. 34	·1125	9. 7	·02455			
3. 0	52. 0	2. 13	·1130		·02506			
3. 13	52. 30	3. 6	·1123	12. 40	·02500			
6. 12	49. 0	4. 0	·1131	13. 3	·02515			
6. 42	49. 0	4. 49	·1131	13. 33	·02490			
7. 0	47. 40	5. 11	·1135	15. 34	·02553			
7. 22	47. 40	5. 30	·1134	23. 59	·02604			
7. 48	49. 10	5. 46	·1136					
8. 0	48. 30	6. 57	·1134					
9. 30	48. 40	7. 15	·1136					
10. 45	47. 15	7. 27	·1135					
11. 37	49. 0	8. 18	·1138					
11. 58	47. 20	8. 27	·1136					
12. 10	49. 30	9. 9	·1137					
12. 50	48. 0	9. 24	·1141					
13. 12:	52. 30	10. 7	·1136					
13. 45	49. 25	10. 49	·1133					
14. 52	48. 15	11. 14	·1144					
	***	11. 28	·1140					
15. 17	48. 40	11. 32	·1143					
16. 0	47. 15	11. 41	·1141					
16. 34	48. 35	11. 59	·1157					
16. 42	47. 35	12. 22	·1142					
17. 4	48. 0	12. 42	·1140					
17. 12	47. 10	13. 2:	·1150					
18. 5	47. 30	13. 24	·1143					
18. 38	47. 5	14. 22	·1136					
19. 37	50. 0	14. 32	·1138					
20. 10	49. 45	14. 43	·1136					
20. 56	47. 30	16. 5	·1144					
21. 28	47. 25	16. 15	·1143					
22. 30	51. 0	16. 33	·1144					
22. 45	49. 25	16. 41	·1142					
22. 57	50. 50	16. 47	·1143					
23. 10:	50. 0	17. 13	·1143					
23. 31	53. 0	17. 51	·1150					
23. 44	53. 10	18. 43	·1143					
23. 59	54. 30	18. 52	·1143					
		19. 43	·1124					
		19. 56	·1122					
		20. 15	·1130					
		21. 3	·1135					
		21. 31	·1133					
		22. 0	·1131					
		22. 25	·1133					
		22. 46	·1125					
		23. 1	·1129					
		23. 16	·1123					
		23. 31	·1127					
		23. 48	·1127					
			(†)					
Nov. 1		Nov. 1		Nov. 1		Nov. 1		
0. 0	20. 54. 35		(†)	0. 0	·02604	1. 0	57·2	58·8
0. 12	53. 0	0. 39	·1124	1. 56	·02577	3. 0	58·0	59·5
0. 25	55. 0	0. 55	·1120	3. 3	·02550	9. 0	58·5	61·0
0. 45	53. 55	1. 14	·1129	3. 23	·02574	21. 37	56·5	58·0
1. 0	54. 35	1. 32	·1136		·02856			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 1		Nov. 1		Nov. 1				
h m	° ′ ″	h m		h m		h m	°	°
1. 32	20. 54. 25	2. 0	·1143	6. 7	·02757			
1. 40	55. 0	2. 8	·1137	6. 45	·02758			
2. 22	53. 0	2. 34	·1146		·02782			
3. 0	55. 0		(†)	8. 40	·02740			
3. 8	54. 10	3. 0	·1136	9. 27	·02744			
3. 17	55. 20	9. 0	·1136	10. 21	·02720			
3. 27	55. 15	9. 17	·1143	11. 9	·02722			
4. 19	53. 5	9. 27	·1146	11. 56	·02680			
4. 35	53. 5	10. 28	·1143	13. 28	·02738			
4. 56	54. 0	10. 38	·1146	18. 2	·02870			
5. 3	53. 0	10. 48	·1142	19. 54	·02926			
5. 8	52. 45	11. 15	·1163	23. 59	·03067			
5. 29	46. 50	11. 38	·1153					
5. 41	48. 10	12. 0	·1150					
5. 46	48. 0	12. 13	·1144					
5. 57	49. 20	12. 21	·1145					
6. 12:	45. 40	12. 34	·1138					
6. 30	49. 15	12. 48	·1137					
6. 38:	48. 0	13. 0	·1139					
6. 57	50. 5	13. 28	·1136					
7. 18	50. 0	13. 45	·1138					
7. 48	48. 30	14. 7	·1136					
7. 55	48. 55	14. 36	·1136					
8. 22	48. 25	14. 59	·1140					
8. 42	50. 0	15. 27	·1140					
9. 2	48. 0	15. 46	·1143					
9. 28	48. 30	16. 29	·1140					
9. 44	49. 15	17. 3	·1146					
10. 42	49. 15	17. 27	·1144					
10. 55	48. 35	17. 41	·1146					
11. 0	51. 0	18. 7	·1131					
11. 28	54. 25	18. 17	·1135					
11. 41	54. 30	18. 37	·1134					
12. 0	51. 55	19. 14	·1140					
12. 22	50. 35	19. 46	·1132					
12. 53:	46. 40	20. 35	·1129					
13. 44	50. 10	21. 47	·1118					
13. 55	49. 25		(†)					
14. 22	50. 0	23. 16	·1113					
14. 25	51. 25	23. 59	·1127					
14. 56	51. 30							
15. 45	50. 10							
16. 15	51. 30							
16. 33	50. 45							
16. 45	51. 30							
17. 2	51. 20							
17. 33	53. 20							
18. 12	52. 0							
19. 0	55. 45							
19. 55	53. 0							
20. 45	52. 50							
21. 10	53. 30							
21. 20	53. 10							
22. 32	55. 20							
22. 46	57. 10							
23. 40	55. 0							
23. 59	54. 30							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 2		Nov. 2		Nov. 2		Nov. 2		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 54. 30	0. 0	·1127	0. 0	·03067	9. 20	56 ·3	57 ·6
1. 30	53. 35	0. 30	·1129	2. 21	·03140	21. 0	54 ·5	55 ·9
1. 33	54. 10	0. 55	·1134	2. 32	·03115			
1. 41	53. 10		(†)	3. 15	·03122			
1. 48	53. 30	9. 20	·1141*	4. 1	·03098			
2. 22	59. 30	11. 43	·1146	7. 5	·03070			
2. 33	55. 5	11. 56	·1150	12. 33	·03144			
2. 46	54. 20	13. 0	·1145	20. 13	·03376			
3. 0	54. 30	13. 18	·1146	23. 5	·03352			
3. 30	52. 30	13. 42	·1144		·03098			
3. 46	52. 30	14. 15	·1146	23. 59	·03096			
4. 2	51. 0	14. 48	·1145					
6. 46	50. 20	17. 29	·1148					
7. 11	49. 40	20. 59	·1137					
7. 22	50. 0	21. 25	·1139					
12. 17	49. 50	21. 49	·1134					
12. 32	48. 35	22. 22	·1134					
12. 45	48. 30		(†)					
12. 58	49. 0							
13. 15	48. 45							
14. 10	49. 45							
14. 38	49. 10							
15. 14	49. 10							
16. 44	50. 30							
16. 53	50. 5							
18. 45	50. 50							
20. 56	49. 40							
22. 13	50. 30							
22. 19	51. 0							
23. 20	51. 25							
23. 25	52. 20							
23. 33	51. 10							
23. 59	52. 40							
Nov. 3		Nov. 3		Nov. 3		Nov. 3		
0. 0	20. 52. 40	1. 0	·1128*	0. 0	·03096	1. 0	56 ·5	57 ·0
0. 12	54. 10	3. 0	·1134*	2. 57	·02974	3. 0	58 ·2	58 ·4
0. 39	52. 30	9. 0	·1143*	7. 0	·02743	9. 0	57 ·5	58 ·2
0. 48	52. 50	21. 0	·1142*	8. 56	·02708	21. 0	50 ·5	52 ·8
0. 59	51. 50			11. 16	·02750			
1. 12	52. 45			11. 45	·02737			
1. 52	48. 10			13. 35	·02838			
3. 0	48. 30			17. 36	·03063			
3. 35	49. 35			19. 57	·03230			
4. 52	50. 0				·03197			
5. 52	49. 30			22. 39	·03032			
9. 38	49. 35			23. 59	·03000			
10. 6	49. 0							
10. 13	49. 30							
10. 57	48. 20							
11. 9	48. 55							
11. 17	52. 30							
11. 30	50. 0							
11. 51	45. 15							
12. 0	45. 10							
12. 31	42. 30							
12. 47	44. 0							
13. 33	44. 25							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 3								
h m	° ′ ″	h m		h m		h m	°	°
13. 42	20. 45. 20							
14. 8	45. 0							
14. 16	44. 0							
14. 35	44. 30							
14. 45	44. 0							
15. 10	44. 10							
15. 55	46. 20							
16. 0	46. 10							
16. 40	48. 40							
16. 57	46. 35							
17. 25	45. 35							
17. 58	45. 40							
18. 16	47. 0							
18. 37	47. 0							
18. 57	48. 30							
19. 2	48. 0							
19. 9	49. 0							
19. 33	48. 20							
19. 59	50. 45							
21. 3	50. 10							
21. 27	52. 40							
21. 39	52. 10							
21. 46	50. 25							
21. 56	51. 40							
	***							
22. 14	50. 20							
22. 19	52. 0							
22. 24	51. 10							
22. 29	52. 0							
22. 35	50. 50							
22. 41	52. 10							
22. 52	52. 0							
23. 3	53. 30							
23. 14	52. 25							
23. 33	52. 45							
23. 45	54. 50							
23. 59	54. 30							
Nov. 4		Nov. 4		Nov. 4		Nov. 4		
0. 0	20. 54. 30		(†)	0. 0	·03000	1. 0	54 ·0	54 ·9
0. 12	57. 0	1. 0	·1115*	0. 12	·03008	3. 0	55 ·6	55 ·8
	***	1. 10	·1104		·02930	9. 0	56 ·8	58 ·0
0. 55	52. 20	1. 52	·1133	1. 35	·02884	21. 0	53 ·3	54 ·8
0. 59	53. 50	2. 6	·1112	3. 34	·02942	22. 0	53 ·0	54 ·0
1. 11	20. 53. 0	2. 17	·1126	3. 51	·02918	23. 0	53 ·7	54 ·5
1. 43	21. 0. 40	2. 30	·1125	4. 8	·02956			
2. 0	20. 57. 50	2. 38	·1133	4. 26	·02988			
2. 9	21. 0. 0	2. 42	·1130	4. 43	·02896			
2. 23	20. 55. 30	2. 57	·1139	5. 2	·02896			
2. 34	57. 0	3. 9	·1126	5. 22	·02852			
2. 42	20. 56. 30	3. 23	·1139	5. 35	·02856			
3. 11	21. 3. 25	3. 38	·1132	5. 51	·02797			
3. 20	20. 59. 35	3. 43	·1137	6. 0	·02790			
3. 35	21. 2. 30	3. 52	·1127	6. 40	·02605			
3. 43	2. 10	4. 0	·1142	7. 53	·02576			
3. 48	0. 30	4. 15	·1129	8. 19	·02548			
3. 56	21. 1. 0	4. 25	·1138	8. 43	·02498			
4. 2	20. 58. 30	4. 33	·1116	9. 40	·02470			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

November 3. The Photographic Trace for the Horizontal Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 4		Nov. 4		Nov. 4				
h m	° ′ ″	h m		h m		h m	°	°
4. 11	21. 4. 10	4. 42	·1131	12. 6	·02408			
4. 24	1. 0	4. 52	·1099	12. 50	·02424			
4. 33	21. 5. 0	5. 2	·1108	13. 11	·02402			
4. 41	20. 59. 55	5. 15	·1089	15. 28	·02470			
4. 52	21. 3. 45	5. 19	·1100	17. 32	·02485			
4. 59	20. 59. 0	5. 22	·1093	23. 4	·02703			
5. 7	21. 1. 40	5. 25	·1095	23. 59	·02700			
5. 18	20. 56. 10	5. 31	·1084					
5. 27	57. 40	5. 35	·1085					
5. 43	51. 15	5. 39	·1082					
5. 47	51. 20	5. 45	·1089					
6. 7	49. 20	6. 1	·1079					
6. 16	45. 50	6. 14	·1082					
6. 23	46. 45	6. 27	·1088					
6. 39	45. 0	6. 33	·1086					
6. 55	45. 50	6. 47	·1096					
7. 0	46. 50	7. 3	·1098					
7. 13	46. 5	7. 19	·1092					
7. 41	43. 0	7. 30	·1095					
7. 53	43. 0	7. 38	·1093					
8. 15	41. 30	7. 48	·1100					
8. 38	44. 10	8. 9	·1098					
9. 3	40. 0	8. 40	·1110					
9. 30	44. 20	8. 59	·1104					
9. 48	46. 45	9. 6	·1108					
9. 57	46. 25	9. 23	·1104					
10. 8	47. 0	9. 47	·1122					
10. 22	46. 0	9. 54	·1123					
10. 45	48. 40	10. 8	·1116					
11. 3	49. 30	10. 17	·1118					
11. 14	49. 10	10. 48	·1118					
11. 18	49. 15	11. 7:	·1123					
11. 23	49. 0	11. 24	·1118					
11. 30	50. 10	11. 35	·1128					
11. 42	49. 20	11. 47	·1129					
11. 46	49. 30	12. 13	·1126					
12. 6	47. 0	12. 33	·1133					
12. 30	46. 30	12. 49	·1148					
12. 51	50. 20	13. 13	·1130					
13. 12	47. 40	13. 36	·1126					
13. 37	49. 30	14. 27	·1125					
13. 51	49. 0	15. 18	·1127					
15. 56	52. 40	16. 36	·1134					
	***	17. 22	·1130					
18. 10	49. 25	17. 32	·1132					
18. 51	49. 40	17. 47	·1128					
19. 0	50. 15	18. 9	·1131					
19. 55	50. 10	18. 25	·1127					
20. 26	49. 20	18. 51	·1124					
20. 53	51. 0	19. 23	·1128					
21. 35	51. 20	19. 38	·1126					
22. 16	52. 25	19. 47	·1129					
23. 4	52. 0	20. 16	·1125					
23. 32	53. 50	20. 24	·1126					
23. 55	53. 40	20. 35	·1124					
23. 59	53. 35	22. 1	·1122					
		22. 13	·1123					
		22. 29	·1120					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Nov. 4						
h m	° ′ ″	h m		h m		h m	°	°
		23. 13	·1121					
		23. 31	·1124					
		23. 59	·1122					
Nov. 5		Nov. 5		Nov. 5		Nov. 5		
0. 0	20. 53. 35	0. 0	·1122	0. 0	·02700	0. 0	53 ·7	54 ·9
0. 38	54. 30	0. 30	·1123	1. 46	·02762	1. 0	54 ·5	55 ·4
0. 51	53. 0	0. 50	·1121	4. 17	·02660	2. 0	55 ·0	56 ·0
0. 59	53. 5	1. 8	·1110	6. 30	·02605	3. 0	55 ·3	56 ·0
1. 38	51. 50	1. 20	·1121	12. 20	·02594	6. 0	55 ·8	56 ·7
1. 55	53. 10	1. 52	·1132	14. 45	·02657	9. 0	55 ·2	56 ·0
2. 19	53. 20	2. 44:	·1122	17. 47	·02816	12. 0	53 ·6	55 ·2
2. 33	53. 0	3. 41	·1133	18. 47	·02882	18. 0	45 ·0	48 ·4
3. 2	51. 0	4. 16	·1132	23. 20	·02683	21. 0	47 ·0	50 ·7
3. 23	50. 25	4. 44	·1136	23. 59	·02644	22. 0	47 ·0	49 ·8
4. 57	50. 10	5. 41	·1132			23. 0	47 ·5	49 ·5
5. 48	50. 30	5. 58	·1133					
6. 5	50. 0	6. 10	·1141					
6. 22:	52. 30	6. 49	·1119					
7. 5	48. 5	7. 29	·1131					
7. 42	49. 0	8. 27	·1135					
8. 12	49. 15	9. 1	·1133					
8. 22	48. 50	9. 20	·1134					
9. 3	48. 50	10. 0	·1136					
10. 12	50. 0	10. 28	·1134					
10. 23	49. 50	11. 0	·1137					
11. 17	49. 30	11. 20	·1138					
11. 30	48. 55	11. 40	·1136					
12. 0	50. 0	12. 0	·1138					
12. 42	50. 0	12. 17	·1136					
13. 4	49. 0	12. 32	·1138					
14. 38	48. 45	12. 49	·1135					
14. 48	49. 30	15. 23	·1137					
15. 5	49. 15	15. 33	·1140					
15. 26	50. 0	16. 13	·1139					
15. 34	50. 0	16. 25	·1141					
16. 18	51. 10	16. 51	·1134					
16. 53	51. 0	17. 14	·1140					
17. 16:	52. 55	17. 37	·1153					
18. 8	48. 0	17. 57	·1155					
18. 27	47. 30	18. 30	·1150					
19. 15	49. 30	18. 35	·1151					
19. 27	50. 55	19. 56	·1144					
20. 11	50. 30	21. 45	·1126					
21. 0	51. 0	22. 52	·1126					
21. 44	50. 40	23. 28	·1135					
22. 3	52. 0	23. 37	·1131					
22. 16	51. 50	23. 59	·1134					
22. 48	52. 30							
23. 0	51. 35							
23. 25	53. 35							
23. 40	53. 0							
23. 59	53. 40							
Nov. 6		Nov. 6		Nov. 6		Nov. 6		
0. 0	20. 53. 40	0. 0	·1134	0. 0	·02644	0. 0	47 ·9	50 ·0
0. 33	55. 25		***	2. 21	·02595	1. 0	49 ·0	50 ·9
0. 57	53. 30	0. 28	·1134		·02428	2. 0	49 ·9	51 ·0

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 6		Nov. 6		Nov. 6		Nov. 6		
h m	° ′ ″	h m		h m		h m	°	°
2. 18	20. 50. 30	0. 58	·1133	5. 24	·02296	3. 0	51 ·0	51 ·7
2. 36	50. 50	1. 15	·1135	12. 22	·02222	9. 0	51 ·0	52 ·2
3. 14	50. 10	1. 36	·1132	17. 45	·02300	21. 0	48 ·7	50 ·8
3. 35	50. 35	1. 58	·1134	21. 39	·02312			
4. 18	50. 10	2. 47	·1145	23. 59	·02390			
5. 4	51. 5	3. 15	·1144					
5. 27	50. 10	3. 36	·1147					
5. 55	48. 25	4. 52	·1148					
6. 12	49. 20	5. 20	·1145					
6. 18	49. 15	5. 26	·1146					
6. 40	49. 50	5. 43	·1138					
7. 12	48. 20	6. 8	·1141					
7. 27	48. 30	6. 52	·1136					
8. 19	47. 30	7. 19	·1140					
8. 32	48. 0	7. 47	·1138					
9. 12	47. 10	8. 6	·1142					
9. 17	47. 30	8. 15	·1141					
9. 35	47. 30	8. 23	·1143					
9. 45	47. 0	8. 50	·1140					
10. 2	47. 30	9. 15	·1146					
10. 15	46. 25	9. 36	·1139					
11. 0	46. 30	10. 8	·1142					
11. 10	47. 0	10. 32	·1140					
11. 46	40. 55	11. 13	·1145					
12. 4	44. 0	11. 25	·1143					
12. 25	45. 50	11. 42	·1156					
12. 38	49. 20	11. 54	·1160					
13. 38	51. 0	12. 17	·1149					
14. 27	50. 20	12. 45	·1147					
15. 15	51. 5	13. 23	·1147					
15. 45	49. 10	14. 24	·1150					
16. 31	50. 35	14. 40	·1152					
16. 43	50. 20	15. 0	·1152					
17. 30	52. 50	15. 23	·1157					
17. 56	52. 0	15. 44	·1155					
18. 4	50. 30	15. 59	·1161					
18. 12	50. 55	17. 13	·1156					
19. 2	48. 30	17. 31	·1153					
20. 0	47. 35	18. 7	·1161					
20. 15	48. 0	18. 47	·1166					
20. 30	46. 35	19. 1	·1164					
20. 49	50. 25	19. 20	·1166					
21. 0	50. 0	19. 30	·1164					
21. 7	50. 30	19. 34	·1167					
21. 25	49. 10	20. 7	·1163					
21. 47	49. 20	20. 17	·1164					
22. 7	51. 0	20. 33	·1158					
22. 18	50. 0	20. 40	·1163					
22. 31	50. 10	21. 2	·1152					
22. 42	51. 0	21. 21	·1147					
23. 0	50. 10	21. 37	·1144					
23. 28	51. 10	22. 17	·1138					
23. 34	51. 0	22. 22	·1142					
23. 59	52. 10	22. 33	·1138					
		22. 55	·1143					
		22. 59	·1146					
		23. 22	·1149					
		23. 30	·1147					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Nov. 6 h m		h m		Nov. 7 h m	°	°
		23. 52	·1150			1. 0	49 ·0	50 ·7
		23. 59	·1152			3. 0	50 ·0	51 ·2
Nov. 7		Nov. 7		Nov. 7		9. 0	48 ·7	50 ·2
0. 0	20. 52. 15	0. 0	·1152	0. 0	·02390	21. 0	42 ·9	44 ·0
0. 5	52. 30	0. 7	·1162	2. 8	·02437			
0. 28	57. 30	0. 27	·1167		·02355			
	(†)	0. 40	·1160	3. 1	·02358			
1. 0	58. 53*	0. 45	·1156		·02206			
3. 0	55. 6*	0. 56	·1156	4. 53	·02155			
5. 7	51. 0	1. 2	·1163	5. 36	·02148			
5. 27	48. 50	1. 41	·1136	6. 7	·02135			
5. 37	50. 50	2. 6	·1147	8. 20	·02106			
5. 53	50. 20	2. 18	·1145	8. 33	·02120			
6. 28	52. 0	2. 31	·1157	9. 30	·02126			
6. 51	47. 55	2. 42	·1150	9. 56	·02104			
7. 34	50. 30	2. 58	·1164	10. 23	·02120			
8. 18	49. 30	3. 44	·1146	11. 30	·02133			
8. 39	45. 20	4. 7	·1150	13. 15	·02194			
8. 52	46. 50	4. 13	·1148		·02165			
9. 27	38. 0	4. 29	·1155	14. 23	·02207			
9. 52	46. 50	4. 38	·1156		·02156			
10. 14	46. 10	4. 48	·1149	23. 7	·02275			
10. 52	50. 55	5. 10	·1143	23. 44	·02298			
11. 7	49. 30	5. 23	·1152	23. 59	·02290			
11. 14	49. 45	5. 33	·1148					
11. 30	48. 15	5. 41	·1150					
12. 2	50. 0	5. 55	·1148					
12. 17	49. 50	6. 3	·1140					
12. 48	51. 30	6. 19	·1147					
14. 8	50. 35	6. 35	·1140					
14. 35	50. 30	6. 45	·1150					
15. 33	50. 50	6. 58	·1150					
16. 27	50. 0	7. 19	·1157					
	***	7. 50	·1154					
17. 52	50. 0	8. 7	·1156					
18. 14	48. 35	8. 25	·1151					
18. 32	50. 10	8. 43	·1159					
19. 52	49. 10	8. 54	·1153					
20. 15	49. 0	9. 7	·1157					
20. 25	48. 25	9. 22	·1171					
20. 32	49. 0	9. 29	·1170					
20. 46	48. 40	9. 39	·1180					
20. 51	49. 20	9. 56	·1164					
20. 59	48. 0	10. 9	·1148					
21. 45	50. 15	10. 16	·1153					
22. 3	50. 30	10. 36	·1153					
22. 14	51. 55	10. 45	·1160					
22. 58	52. 45	11. 0	·1158					
23. 7	52. 0	11. 22	·1166					
23. 50	53. 50	11. 31	·1159					
	(†)	11. 56	·1154					
		12. 13	·1156					
		12. 28	·1155					
		12. 35	·1157					
		12. 43	·1155					
		13. 0	·1158					
		13. 15	·1156					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Nov. 7 h m		h m		h m	°	°
		13. 37	·1160					
		14. 11	·1159					
		15. 15	·1163					
		15. 30	·1162					
		15. 47	·1164					
		16. 22	·1167					
		16. 37	·1165					
		16. 52	·1168					
		17. 0	·1166					
		17. 37	·1166					
		17. 47	·1170					
		18. 0	·1168					
		18. 3	·1171					
		18. 28	·1168					
		18. 45	·1170					
		20. 13	·1164					
		20. 44	·1162					
		20. 57	·1164					
		21. 14	·1163					
		21. 28	·1160					
		21. 57	·1159					
		22. 13	·1155					
		23. 14	·1156					
		23. 59	·1159					
Nov. 8		Nov. 8		Nov. 8		Nov. 8		
	(†)	0. 0	·1159	0. 0	·02290	1. 0	46 ·1	47 ·2
0. 26	20. 53. 35		(†)	0. 23	·02266	3. 0	48 ·0	49 ·2
0. 36	57. 0	1. 0	·1162		(†)	9. 0	50 ·3	50 ·4
1. 0	53. 50	3. 0	·1157*	1. 0	·02304	22. 35	50 ·0	50 ·8
1. 15	55. 50	3. 25	·1153	1. 51	·01807			
1. 26	54. 0	3. 42	·1148	2. 10	·01842			
1. 42	55. 30	4. 2	·1161	3. 39	·01740			
1. 56	53. 10	4. 15	·1159	8. 24	·01888			
2. 14	52. 25	4. 28	·1168	9. 32	·01900			
2. 55	58. 0	4. 45	·1168	10. 7	·01957			
3. 8	55. 30	4. 53	·1163	10. 29	·02078			
3. 16	56. 10	4. 59	·1165	11. 38	·02078			
3. 49:	51. 35	5. 8	·1159	16. 10	·02146			
4. 27	54. 50	5. 20	·1161	18. 57	·02160			
4. 42	54. 0	5. 29	·1159	20. 30	·02184			
5. 2	56. 10	5. 44	·1165	23. 59	·02190			
5. 35	52. 30	5. 52	·1160					
5. 43	52. 50	6. 14	·1170					
5. 55	52. 20	6. 33	·1160					
6. 15	53. 0	6. 42	·1165					
7. 3	51. 20	6. 57	·1159					
7. 17	50. 10	7. 7	·1161					
7. 38	50. 20	7. 16	·1156					
7. 59	49. 10	7. 48	·1162					
8. 26	51. 10	8. 18	·1161					
9. 6	49. 0	8. 28	·1154					
9. 33	49. 15	8. 39	·1156					
9. 45	47. 40	9. 29	·1153					
9. 59	47. 40	9. 40	·1160					
10. 7	46. 5	9. 55	·1157					
10. 45	44. 0	10. 5	·1162					
10. 54	45. 5	10. 21	·1159					
Nov. 8		Nov. 8						
11. 14	20. 43. 35	11. 0	·1165					
11. 33	48. 0	11. 23	·1147					
11. 47	46. 40	11. 46	·1152					
12. 18	46. 30	12. 15	·1150					
13. 9	49. 30	13. 1	·1152					
14. 0	50. 20	13. 7	·1150					
14. 6	48. 30	13. 34	·1153					
14. 30	50. 35	14. 20	·1152					
15. 14	49. 40	15. 7	·1157					
15. 43	51. 5	15. 55	·1156					
16. 19	49. 55	16. 37	·1158					
16. 28	50. 0	16. 43	·1157					
16. 34	48. 25	17. 0	·1163					
16. 40	48. 55	17. 15	·1159					
16. 45	48. 30	18. 25:	·1156					
16. 50	50. 10	19. 6:	·1143					
17. 6	49. 0	20. 4:	·1157					
17. 20	49. 5	20. 31	·1154					
17. 55	48. 0	20. 50	·1156					
18. 33	49. 50	21. 6	·1150					
18. 48	48. 50	21. 38	·1151					
19. 5	50. 10	22. 2	·1145					
19. 40	47. 55	23. 17	·1144					
20. 28	48. 55	23. 39	·1144					
20. 49	51. 40	23. 59	·1142					
21. 1	50. 0							
21. 32	49. 20							
22. 3	50. 55							
22. 25	50. 0							
23. 25	52. 20							
23. 27	51. 50							
23. 34	52. 45							
23. 48	53. 25							
23. 57	53. 0							
23. 59	53. 0							
Nov. 9		Nov. 9		Nov. 9		Nov. 9		
0. 0	20. 53. 5	0. 0	·1142	0. 0	·02190	8. 25	·53	·0 53 ·4
0. 30	55. 40		***	1. 47	·02216	21. 0	·48	·0 48 ·9
0. 35	54. 10	0. 31	·1151	4. 36	·02144			
0. 52	55. 20	0. 43	·1145	6. 35	·02048			
1. 27	54. 10	1. 2	·1150	8. 6	·02116			
1. 45	52. 0	1. 32	·1136	9. 4	·02120			
2. 8	52. 0	1. 44	·1135	9. 22	·02137			
2. 30	53. 0	2. 4	·1150	9. 37	·02106			
3. 3	52. 30	2. 16	·1146	10. 26	·02090			
3. 13	51. 50	2. 27	·1149	12. 32	·02124			
3. 41	51. 20	2. 42	·1149	13. 12	·02118			
4. 2	51. 0	3. 4	·1153	13. 35	·02126			
4. 33	50. 40	3. 15	·1151	14. 6	·02103			
5. 24	51. 55	3. 45	·1155	21. 9	{ ·02424			
6. 33	51. 0	3. 53	·1158		{ ·02292			
6. 57	50. 0	4. 8	·1155	23. 59	·02296			
7. 4	50. 20	4. 40	·1156					
7. 16	48. 30	4. 48	·1160					
7. 30	48. 10	5. 0	·1155					
8. 3	42. 40	5. 16	·1153					
8. 12	42. 35	5. 28	·1156					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Nov. 9	
h m	° ′ ″
8. 51	20. 41. 45
9. 12	44. 35
9. 27	42. 30
9. 42	51. 55
9. 57	48. 55
10. 4	49. 45
10. 10	49. 0
10. 17	49. 50
10. 30	48. 10
10. 45	47. 30
10. 54	48. 0
11. 15	46. 30
11. 55	48. 45
12. 10	48. 0
12. 19	46. 55
12. 28	47. 30
12. 33	46. 55
12. 45	46. 50
12. 59	45. 55
13. 8	45. 35
13. 38	46. 50
13. 47	49. 50
14. 19	47. 10
14. 55	50. 0
15. 4	49. 30
15. 15	49. 45
15. 30	48. 10
16. 16	50. 0
16. 27	49. 30
16. 40	50. 5
16. 57	49. 45
18. 30	48. 35
18. 55	50. 0
19. 27	49. 30
20. 17	51. 10
20. 45	49. 50
20. 57	50. 10
21. 19	49. 10
21. 47	50. 40
22. 0	50. 30
22. 12	51. 35
22. 29	51. 35
22. 45	54. 50
22. 56	55. 10
23. 10	56. 25
23. 39	55. 0
23. 42	55. 20
23. 59	53. 10
Nov. 10	
0. 0	20. 53. 0
0. 18	54. 10
0. 56	51. 50
1. 2	52. 50
1. 7	51. 55
1. 45	53. 40
1. 57	53. 0
2. 8	53. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 9	
h m	
6. 7	·1152
6. 30	·1153
6. 46	·1149
6. 57	·1153
7. 2	·1152
7. 47:	·1132
8. 43	·1144
9. 3	·1137
9. 32	·1155
9. 45	·1134
9. 56	·1144
10. 2	·1140
10. 12	·1145
10. 17	·1136
10. 31	·1147
10. 59	·1137
11. 22	·1145
11. 38	·1140
11. 51	·1142
11. 56	·1141
12. 33:	·1147
13. 11	·1143
13. 44	·1160
14. 12	·1137
14. 35	·1144
15. 4	·1139
15. 37	·1152
16. 30:	·1144
17. 37	·1149
19. 29	·1152
19. 46	·1149
20. 19	·1139
20. 40	·1142
20. 52	·1140
21. 45	·1147
22. 0	·1139
22. 14	·1149
22. 31	·1139
22. 46	·1152
23. 1	·1147
23. 25	·1141
23. 35	·1134
	(†)
Nov. 10	
	(†)
1. 0	·1144*
1. 58	·1143
2. 16	·1152
2. 39	·1143
3. 7	·1158
3. 40	·1145
4. 7	·1153

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 10	
0. 0	·02296
1. 7	·02300
	·01975
5. 39	·01836
7. 49	·01876
9. 25	·01958
10. 45	·02000
10. 59	·02034

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 10		
1. 0	49·5	50·0
3. 0	50·9	51·0
9. 0	48·0	47·9
21. 0	40·0	41·0

Greenwich Mean Solar Time.	Western Declination.
Nov. 10	
h m	° ′ ″
2. 17	20. 53. 25
2. 46:	49. 40
3. 25	51. 50
3. 55	48. 15
4. 13	50. 40
4. 23	48. 40
4. 33	49. 0
4. 38	47. 0
4. 48	48. 30
4. 54	48. 25
5. 7	50. 15
5. 33	50. 40
5. 45	48. 25
5. 56	42. 40
6. 3	40. 30
6. 21	43. 30
6. 27	43. 25
6. 41	45. 30
7. 4	47. 30
7. 15	45. 0
7. 20	45. 30
7. 24	45. 10
7. 37	44. 0
7. 52	46. 0
8. 0	46. 0
8. 15	47. 40
8. 35	46. 30
8. 48	47. 25
9. 10	46. 20
9. 32	48. 40
9. 57	44. 45
10. 15	44. 35
10. 30	42. 30
10. 41	43. 15
10. 53	41. 0
11. 2	36. 55
11. 14	36. 0
11. 22	34. 20
12. 3	42. 40
12. 28	44. 0
13. 12	49. 30
13. 33	49. 0
14. 7	51. 0
14. 33	50. 30
15. 8	50. 20
15. 40	49. 40
16. 30	50. 0
16. 46	49. 30
17. 11	50. 0
17. 20	49. 30
17. 52	49. 30
18. 2	49. 0
19. 48	48. 40
20. 0	49. 0
20. 36	47. 30
21. 5	48. 30
21. 28	46. 45
22. 44	46. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 10	
h m	
4. 27	·1148
4. 34	·1152
4. 40	·1147
4. 47	·1158
4. 57	·1159
5. 7	·1164
5. 22	·1162
5. 38	·1161
5. 55	·1146
6. 22	·1175
6. 51	·1150
7. 2	·1153
7. 14	·1149
7. 24	·1158
7. 31	·1156
7. 49	·1165
8. 14	·1150
8. 28	·1140
8. 47	·1150
9. 0	·1148
9. 10	·1147
9. 45	·1157
10. 20	·1148
10. 45	·1132
11. 23	·1172
12. 2	·1149
12. 22	·1158
13. 40	·1156
14. 55	·1158
15. 52	·1160
16. 13	·1165
16. 59	·1162
17. 23	·1166
18. 34	·1161
18. 50	·1165
19. 26	·1159
19. 53	·1162
20. 33	·1158
21. 1	·1161
21. 29	·1159
22. 16:	·1156
22. 57	·1159
23. 6	·1156
23. 25	·1163
23. 42	·1157
23. 59	·1158

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 10	
11. 57	·02052
17. 18	·02348
17. 38	·02306
19. 19	·02214
22. 1	·02188
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 10								
h m	° ′ ″	h m		h m		h m	°	°
22. 58	20. 47. 40							
23. 12	47. 0							
23. 31	49. 15							
23. 45	48. 25							
23. 59	47. 45							
Nov. 11		Nov. 11		Nov. 11		Nov. 11		
0. 0	20. 47. 40	0. 0	·1158			1. 0	41 ·2	44 ·0
0. 10	47. 30	0. 10	·1159	0. 30	·02140	3. 0	43 ·2	44 ·0
1. 12	51. 10	0. 23	·1165	3. 32	·02082	9. 0	43 ·0	44 ·5
1. 43	49. 30	0. 40	·1160	4. 42	·02015	21. 0	36 ·0	38 ·0
2. 34	48. 55	1. 0	·1164	7. 0	·01966	22. 0	36 ·7	38 ·8
3. 15	48. 0	1. 8	·1163	7. 33	·01930	23. 0	37 ·5	39 ·0
4. 6	49. 15	1. 15	·1165	7. 45	·01936			
4. 19	49. 0	2. 14	·1165	8. 13	·01854			
4. 29	47. 45	2. 37	·1170	10. 34	·01862			
4. 33	47. 55	3. 15	·1171	11. 14	·01817			
4. 46	46. 30	3. 30	·1174	17. 23	·02142			
4. 52	44. 0	4. 16	·1168	19. 38	·02317			
5. 14	42. 0	4. 29	·1161		(†)			
5. 35	45. 35	4. 42	·1169	21. 0	·02408*			
5. 50	45. 0	4. 52	·1158	23. 10	·02357			
6. 12	41. 0	5. 1	·1164	23. 59	·02340			
	***	5. 10	·1163					
6. 47	44. 20	5. 34	·1168					
7. 2	48. 20	6. 7	·1150					
7. 17	49. 5	6. 15	·1160					
7. 23	48. 15	6. 28	·1156					
7. 38	38. 45	6. 38	·1162					
8. 3	52. 25	6. 47	·1156					
8. 36	44. 10	7. 0	·1161					
8. 44	45. 10	7. 23	·1151					
9. 0	43. 40	7. 53	·1210					
9. 12	46. 30	8. 21	·1158					
9. 21	46. 20	8. 36	·1164					
9. 30	47. 0	9. 1	·1164					
9. 40	46. 45	9. 31	·1147					
10. 15	48. 0	9. 48	·1153					
10. 35	46. 50	10. 7	·1153					
10. 52	51. 30	10. 27	·1166					
11. 5	53. 30	10. 42	·1184					
11. 27	49. 0	11. 3	·1157					
11. 41	44. 35	11. 20	·1151					
12. 17	48. 15	11. 30	·1160					
12. 54	46. 30	11. 39	·1164					
13. 22	48. 45	11. 52	·1163					
13. 50	48. 35	12. 7	·1158					
	***	12. 37	·1156					
14. 19	49. 50	12. 52	·1159					
	***	13. 8	·1156					
16. 29	50. 0	15. 45	·1165					
16. 33	51. 0	15. 54	·1163					
16. 43	49. 30	16. 20	·1167					
	***	16. 29	·1163					
19. 29	48. 20	17. 4	·1166					
20. 23	47. 35	17. 50	·1165					
20. 32	47. 5	18. 23	·1166					
20. 45	47. 30	19. 47	·1164					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 11		Nov. 11						
h m	° ′ ″	h m		h m		h m	°	°
21. 30	20. 46. 20	21. 0	·1163*					
21. 48	47. 35	23. 0	·1144					
22. 35	48. 0	23. 59	·1161					
23. 21	53. 50							
23. 35	53. 0							
23. 49	52. 55							
23. 59	51. 55							
Nov. 12		Nov. 12		Nov. 12		Nov. 12		
0. 0	20. 51. 40	0. 0	·1161	0. 0	·02340	0. 0	38 ·4	39 ·4
0. 3	51. 30	0. 36	·1158	0. 17	{·02350	1. 0	39 ·9	41 ·0
0. 10	52. 0	1. 13	·1165		{·02302	2. 0	42 ·0	44 ·0
0. 13	51. 35	1. 31	·1162	0. 42	·02304	3. 0	44 ·7	44 ·5
0. 27	51. 55	1. 55	·1162	1. 31	·02382	6. 0	45 ·5	46 ·5
0. 36	51. 20	2. 31	·1165	3. 12	·02090	9. 0	44 ·5	45 ·5
0. 44	52. 20	2. 58	·1162	5. 37	·01788	12. 0	43 ·8	44 ·5
1. 13	49. 30	3. 57	·1165	6. 52	·01860	18. 0	38 ·0	40 ·2
1. 23	49. 50	4. 10	·1164	9. 16	·01935	21. 0	36 ·5	39 ·0
1. 34	49. 0	4. 23	·1167	9. 28	·01927	22. 0	36 ·7	39 ·0
	(†)	5. 11	·1168	9. 48	·01940	23. 0	37 ·0	39 ·0
2. 13	50. 0	5. 27	·1166	10. 8	·01926			
2. 40	48. 30	6. 16	·1168	13. 43	·01995			
4. 15	50. 30	6. 46	·1165	17. 23	·02142			
4. 30	50. 25	7. 8	·1159	21. 51	·02467			
5. 55	50. 30	7. 40	·1162	23. 59	·02610			
6. 3	50. 15	8. 1	·1160					
6. 49	51. 0	8. 25	·1161					
7. 28	49. 45	9. 1	·1156					
7. 45	50. 30	9. 28	·1158					
8. 51	49. 50	9. 36	·1171					
9. 6	48. 0	9. 39	·1171					
9. 25	47. 40	9. 46	·1174					
9. 41	42. 0	10. 7	·1152					
10. 8	49. 5	10. 19	·1156					
10. 27	46. 15	10. 46	·1154					
11. 10	47. 50	11. 6	·1158					
11. 27	49. 0	11. 26	·1156					
13. 16	50. 50	12. 7	·1160					
18. 56	50. 55	12. 22	·1159					
19. 5	50. 15	13. 14	·1163					
19. 34	50. 0	13. 30	·1163					
20. 25	48. 10	13. 50	·1165					
20. 43	48. 30	15. 28	·1168					
21. 6	42. 30	16. 39	·1172					
22. 3	49. 30	17. 10	·1173					
22. 23	50. 50	17. 43	·1173					
22. 29	50. 25	18. 8	·1169					
22. 35	53. 0	18. 42	·1174					
22. 46	53. 25	19. 9	·1172					
	(†)	19. 21	·1173					
23. 27	52. 5	21. 2	·1164					
23. 54	51. 45	21. 17	·1163					
23. 59	51. 35	22. 12	·1164					
			(†)					
		23. 47	·1157					
		23. 59	·1159					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 13		Nov. 13		Nov. 13		Nov. 13		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 51. 30	0. 0	·1159	0. 0	·02610	0. 0	38 ·2	40 ·0
0. 8	51. 25	0. 23	·1159	2. 16	·02538	1. 0	39 ·0	41 ·0
0. 41	52. 20	0. 45	·1162	7. 39	·02118	2. 0	40 ·5	42 ·0
1. 17	50. 30	1. 14	·1163	13. 2	·02048	3. 0	41 ·9	43 ·2
1. 31	51. 0	1. 35	·1161	18. 26	·02266	9. 20	43 ·5	44 ·4
1. 50	50. 0	2. 7	·1163	22. 25	·02474	21. 0	37 ·9	40 ·0
2. 15	49. 40	2. 21	·1158	23. 59	·02463			
2. 28	48. 35	3. 22	·1165					
3. 15	48. 25	3. 50	·1162					
3. 30	48. 45	4. 39	·1169					
4. 18	48. 30	4. 58	·1168					
4. 41	49. 30	5. 32	·1173					
6. 0	49. 10	6. 5	·1163					
6. 13	48. 10	6. 31	·1164					
6. 27	48. 15	6. 47	·1159					
6. 42	46. 0	7. 17	·1166					
6. 56	45. 30	7. 41	·1162					
7. 49	48. 30	8. 1	·1163					
8. 45	48. 10	8. 22	·1168					
8. 58	46. 30	8. 30	·1166					
9. 22	48. 0	8. 39	·1168					
10. 10	48. 45	8. 56	·1165					
11. 4	48. 30	9. 7	·1168					
11. 26	49. 0	9. 20	·1166					
12. 43	48. 0	9. 30	·1168					
12. 58	49. 10	9. 53	·1166					
13. 17	46. 55	10. 18	·1169					
13. 30	47. 0	10. 53	·1167					
13. 57	50. 10	11. 13	·1167					
14. 58	50. 10	11. 31	·1170					
15. 9	50. 35	11. 48	·1164					
	***	12. 4	·1172					
15. 55	48. 0	12. 33	·1166					
16. 14	49. 50	12. 39	·1168					
16. 30	49. 0	12. 50	·1159					
16. 40	49. 30	13. 4	·1159					
16. 48	49. 0	13. 51	·1163					
17. 0	49. 15	14. 1	·1167					
17. 30	48. 40	14. 12	·1165					
17. 56	49. 25	14. 22	·1166					
18. 30	49. 30	14. 31	·1164					
18. 45	48. 30	14. 46	·1167					
19. 0	49. 0	14. 56	·1165					
19. 18	48. 30	15. 2	·1169					
19. 35	49. 0	15. 11	·1168					
	***	15. 45	·1169					
21. 4	47. 15	16. 30	·1173					
21. 22	47. 30	16. 50	·1171					
21. 26	47. 25	17. 32	·1173					
21. 35	47. 30	17. 45	·1176					
21. 48	46. 30	17. 55	·1175					
21. 56	46. 50	18. 22	·1178					
	***	18. 32	·1174					
22. 36	46. 0	18. 50	·1178					
22. 44	47. 0	19. 18	·1180					
22. 50	46. 0	19. 31	·1177					
23. 14	46. 30	19. 37	·1180					
23. 22	48. 0	19. 46	·1177					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 13		Nov. 13						
h m	° ′ ″	h m		h m		h m	°	°
23. 27	20. 47. 45	20. 16	·1175					
23. 46	49. 0	20. 22	·1178					
23. 54	48. 55	20. 30	·1175					
23. 59	49. 15	21. 5	·1175					
		21. 19	·1174					
		22. 14	·1166					
		22. 35	·1167					
		22. 47	·1174					
		23. 7	·1174					
		23. 28	·1171					
		23. 59	·1166					
Nov. 14		Nov. 14		Nov. 14		Nov. 14		
0. 0	20. 49. 25	0. 0	·1166	0. 0	·02463	1. 0	41 ·3	42 ·7
0. 12	49. 15	0. 29	·1164	1. 49	·02392	3. 0	44 ·5	45 ·6
0. 23	50. 15	0. 43	·1164	3. 38	·02184	9. 0	47 ·0	47 ·0
0. 33	49. 55	1. 14	·1162	6. 6	·01910	21. 0	43 ·6	45 ·0
1. 14	51. 5	1. 23	·1166		·01966			
1. 48	48. 30	2. 16	·1160	9. 2	·02109			
1. 57	50. 0	2. 55	·1165	9. 18	·02096			
2. 37	50. 0	3. 14	·1154	9. 53	·02135			
3. 1	52. 30	3. 30	·1164	12. 57	·02162			
3. 8	52. 20	3. 37	·1163	13. 57	·02144			
3. 32	52. 45	3. 49	·1171	21. 18	·02255			
3. 47	51. 0	4. 10	·1168	23. 3	·02304			
3. 58	51. 10	4. 38	·1171	23. 59	·02336			
4. 8	49. 30	4. 56	·1175					
4. 18	50. 20	5. 10	·1173					
4. 41	50. 25	5. 21	·1175					
5. 9	49. 0	5. 41	·1166					
5. 48	51. 0	6. 22	·1167					
6. 26	49. 30	6. 32	·1169					
7. 3	49. 45	6. 43	·1167					
7. 15	49. 15	6. 46	·1169					
7. 30	49. 50	6. 52	·1167					
7. 43	49. 20	7. 15	·1168					
8. 15	49. 25	7. 38	·1166					
8. 30	49. 45	8. 5	·1166					
8. 59	47. 30	8. 29	·1158					
9. 16	49. 30	8. 49	·1174					
9. 29	43. 20	9. 4	·1159					
9. 53	37. 25	9. 15	·1159					
10. 9	42. 15	9. 38	·1172					
10. 12	42. 20	10. 1	·1171					
10. 37	46. 30	10. 22	·1154					
11. 27	44. 55	10. 37	·1157					
11. 37	45. 5	10. 55	·1150					
12. 0	41. 40	11. 42	·1155					
12. 23	46. 0	11. 54	·1152					
13. 0	46. 25	12. 20	·1156					
13. 8	48. 15	12. 44	·1168					
13. 27	46. 30	12. 53	·1163					
13. 42	47. 0	13. 10	·1164					
13. 55	45. 50	13. 24	·1153					
14. 13	48. 25	13. 42	·1158					
14. 19	48. 10	14. 0	·1154					
14. 23	48. 50	14. 23	·1160					
14. 38	48. 0	14. 31	·1157					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 14	
h m	° ′ ″
14. 42	20. 48. 50
14. 52	47. 55
14. 58	48. 5
15. 6	46. 50
15. 12	47. 15
15. 38	46. 50
15. 53	49. 0
16. 4	48. 40
16. 30	49. 50
16. 40	49. 20
16. 53	49. 50
17. 9	49. 30
17. 35	50. 30
17. 42	49. 50
17. 53	50. 10
18. 0	49. 30
18. 8	49. 25
18. 24	50. 40
18. 39	49. 30
18. 56	50. 20
19. 25	49. 25
19. 44	50. 50
19. 56	51. 0
20. 5	51. 10
20. 27	50. 0
20. 56	51. 25
21. 15	49. 30
21. 32	49. 20
21. 44	50. 30
21. 50	50. 0
21. 59	50. 0
22. 9	48. 40
22. 15	50. 30
23. 2	49. 0
23. 22	51. 0
23. 30	50. 40
23. 37	51. 40
23. 40	53. 0
23. 48	51. 55
23. 59	51. 45
Nov. 15	
0. 0	20. 51. 45
0. 7	53. 50
0. 23	54. 0
0. 43	51. 0
0. 45	50. 50
1. 0	49. 40
1. 24	50. 45
1. 32	50. 0
1. 51	50. 35
2. 14:	49. 15
2. 30	50. 10
2. 57	50. 40
3. 33	52. 15
4. 8	50. 55
4. 18	48. 25
4. 30	48. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 14	
h m	
14. 45	·1159
14. 52	·1157
14. 58	·1158
15. 52	·1154
16. 20	·1162
17. 2	·1158
17. 17	·1161
17. 33	·1160
17. 50	·1165
18. 2	·1163
18. 17	·1164
18. 25	·1160
18. 37	·1164
18. 45	·1161
19. 24	·1161
19. 32	·1165
19. 54	·1161
20. 11	·1163
20. 37	·1153
21. 0	·1157
21. 19	·1153
21. 36	·1154
21. 45	·1156
22. 11	·1152
22. 37	·1158
22. 45	·1156
23. 17	·1159
23. 34	·1157
23. 46	·1162
23. 59	·1154
Nov. 15	
0. 0	·1154
0. 8	·1153
0. 31	·1148
0. 40	·1141
0. 45	·1138
1. 1	·1151
1. 15	·1149
1. 49	·1148
2. 40:	·1160
3. 18	·1141
3. 30	·1149
4. 2	·1142
4. 12	·1134
4. 23	·1134
4. 43	·1129
4. 56	·1140

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 15	
0. 0	·02336
1. 20	·02343
3. 25	·02230
	·02556
7. 14	·02498
10. 54	·02516
11. 53	·02476
12. 37	·02500
20. 27	·02586
22. 2	·02597
23. 59	·02618

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 15		
1. 0	45 ·9	46 ·9
3. 0	48 ·2	48 ·6
9. 0	48 ·4	48 ·9
21. 15	46 ·0	47 ·4

Greenwich Mean Solar Time.	Western Declination.
Nov. 15	
h m	° ′ ″
4. 57	20. 44. 20
6. 15	50. 30
6. 25	50. 15
6. 45	47. 20
6. 55	48. 30
7. 16	46. 0
7. 27	47. 0
7. 40	45. 0
7. 58	49. 0
8. 30	50. 0
9. 4	48. 45
9. 13	49. 0
9. 52	48. 40
10. 9	49. 5
10. 32	49. 5
10. 51	50. 0
11. 4	51. 50
11. 20	50. 10
11. 36	49. 10
12. 15:	43. 0
12. 38	46. 20
13. 3	48. 25
13. 32	49. 30
14. 8	48. 30
14. 33	46. 20
15. 1	46. 55
15. 27	51. 0
16. 13	48. 40
16. 30	49. 0
16. 39	48. 0
17. 11	47. 20
17. 48	48. 15
19. 48	47. 0
21. 14	47. 20
22. 11	50. 0
23. 28	51. 15
23. 59	51. 10
Nov. 16	
0. 0	20. 51. 10
2. 18	49. 20
5. 38	49. 0
6. 0	49. 20
6. 21	48. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 15	
h m	
5. 8	·1137
5. 19	·1141
5. 28	·1148
5. 45	·1151
6. 0	·1146
6. 19	·1154
6. 30	·1152
6. 50	·1164
7. 7	·1156
7. 19	·1160
7. 29	·1160
7. 43	·1172
8. 2	·1160
8. 46	·1157
9. 5	·1160
9. 25	·1156
9. 36	·1157
9. 46	·1155
10. 10	·1160
10. 30	·1157
10. 50	·1162
11. 10	·1155
11. 22	·1158
11. 45	·1159
12. 1	·1162
12. 22	·1157
12. 36	·1157
13. 3	·1152
13. 36	·1156
13. 51	·1152
14. 16	·1156
15. 11	·1153
15. 26	·1157
15. 37	·1156
15. 44	·1159
16. 30	·1158
16. 37	·1156
16. 58	·1160
17. 24	·1156
17. 44	·1155
18. 23	·1156
19. 0	·1159
19. 11	·1157
19. 35	·1157
19. 49	·1155
21. 38	·1154
21. 45	·1155
22. 3	·1152
22. 30	·1152
23. 22	·1152
23. 59	·1154
Nov. 16	
0. 0	·1154
0. 47	·1156
1. 6	·1158
1. 38	·1158
2. 46	·1155

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 16	
0. 0	·02618
2. 13	·02577
4. 37	·02470
	·02525
6. 7	·02470

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 16		
9. 0	48 ·2	49 ·6
21. 0	44 ·7	46 ·2

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 16		Nov. 16		Nov. 16		h m	°	°
h m	° ′ ″	h m		h m				
6. 33	20. 48. 20	3. 30	·1154	6. 43	·02463			
6. 48	44. 50	4. 25	·1156		·02537			
7. 3	46. 0	5. 22	·1159	8. 6	·02526			
7. 15	45. 35	5. 36	·1159	16. 55	·02545			
7. 30	47. 40	5. 53	·1163	19. 38	·02598			
7. 46	47. 40	6. 14	·1159	20. 0	·02620			
8. 38	48. 30	6. 27	·1153	20. 36	·02642			
8. 47	49. 0	6. 51	·1157	22. 53	·02785			
8. 55	48. 25	7. 1	·1163	23. 59	·02806			
9. 10	48. 55	7. 17	·1158					
9. 19	48. 0	7. 43	·1154					
9. 32	48. 30	8. 1	·1157					
10. 9	47. 30	8. 45	·1159					
10. 37	49. 55	9. 0	·1163					
11. 2	48. 30	9. 13	·1159					
11. 45	51. 15	9. 22	·1164					
12. 24	49. 55	10. 7	·1160					
12. 52	51. 5	10. 37	·1163					
13. 16	50. 20	10. 54	·1169					
13. 35	50. 25	11. 17	·1166					
14. 11	48. 30	11. 41	·1159					
14. 31	49. 55	12. 0	·1155					
14. 42	50. 0	12. 5	·1156					
15. 7	52. 0	12. 11	·1153					
15. 58	49. 10	12. 44	·1159					
16. 16	49. 0	13. 1	·1157					
17. 45	53. 0	13. 47	·1161					
18. 14	51. 40	14. 26	·1155					
18. 59	53. 30	15. 19	·1161					
19. 11	53. 0	15. 32	·1160					
19. 27	53. 55	16. 31	·1169					
19. 47	51. 20	17. 31	·1164					
20. 8	54. 0	17. 47	·1164					
20. 38	51. 30	18. 32	·1173					
20. 58	51. 20	19. 7	·1160					
21. 2	51. 0	19. 22	·1161					
21. 20	52. 0	19. 43	·1148					
	***	19. 57	·1157					
21. 38	50. 20	20. 22	·1157					
21. 57	50. 20	20. 54	·1156					
22. 15	52. 0	21. 2	·1152					
22. 41	52. 0	21. 51	·1155					
22. 47	52. 10		***					
23. 7	51. 10	22. 39	·1145					
23. 13	53. 0	22. 45	·1154					
	***	23. 0	·1145					
23. 28	51. 10	23. 30	·1153					
23. 47	52. 50	23. 59	·1150					
23. 56	52. 40							
23. 59	53. 25							
Nov. 17		Nov. 17		Nov. 17		Nov. 17		
0. 0	20. 53. 25	0. 0	·1150	0. 0	·02806	1. 0	47 ·0	48 ·2
0. 25	56. 0	0. 30	·1149	1. 48	·02763	3. 0	49 ·5	50 ·7
0. 30	54. 40	0. 50	·1143	3. 2	·02660	9. 0	49 ·9	50 ·7
0. 42	55. 0	1. 18	·1146	3. 43	·02558	21. 0	45 ·0	44 ·9
0. 51	54. 25	1. 32	·1153	4. 6	·02529			
0. 59	54. 50	1. 35	·1156	4. 15	·02582			

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Nov. 17		Nov. 17		Nov. 17		h m	°	°
h m	° ′ ″	h m		h m				
1. 10	20. 54. 10	1. 45	·1153	4. 48	·02530			
1. 22	54. 30	1. 52	·1157	4. 56	·02545			
1. 43	54. 0	2. 0	·1155	5. 31	·02510			
2. 4	51. 40	2. 7	·1159	5. 38	·02521			
2. 25	52. 0	2. 38	·1160	5. 43	·02563			
2. 35	51. 50	3. 1	·1164	6. 26	·02518			
3. 26	55. 0	3. 43	·1152	6. 42	·02544			
4. 15	53. 0	3. 58	·1156	6. 49	·02578			
4. 41	54. 10	4. 8	·1156	8. 9	·02540			
5. 17	51. 45	4. 28	·1160	8. 22	·02543			
5. 40	51. 30	4. 46	·1150	8. 26	·02587			
6. 20	52. 35	5. 8	·1147	9. 38	·02530			
6. 37	52. 30	5. 49	·1154	9. 54	·02555			
6. 57	51. 0	6. 8	·1150	10. 53	·02573			
7. 11	51. 50	6. 17	·1153	13. 31	·02686			
7. 26	49. 55	6. 42	·1151	14. 17	·02680			
7. 41	50. 25	6. 53	·1155	15. 2	·02735			
7. 50	48. 20	6. 59	·1153	15. 31	·02753			
8. 15	46. 25	7. 2	·1155	16. 58	·02845			
8. 35	52. 30	7. 16	·1147	20. 55	·03040			
8. 48	50. 0	7. 31	·1155		·02696			
9. 0	43. 30	7. 37	·1151	22. 53	·02790			
9. 31	51. 0	7. 45	·1153	23. 26	·02782			
9. 45	47. 40	7. 52	·1150	23. 59	·02803			
10. 0	40. 40	8. 1	·1157					
10. 18	45. 10	8. 13	·1154					
10. 34	46. 20	8. 22	·1161					
10. 50	48. 40	8. 45	·1145					
11. 12	45. 30	9. 0	·1175					
12. 21	50. 30	9. 3	·1173					
13. 22	49. 0	9. 8	·1178					
14. 0	55. 10	9. 20	·1168					
14. 33	48. 20	9. 30	·1148					
14. 45	50. 0	9. 40	·1136					
14. 47	49. 30	10. 1	·1158					
15. 10	52. 0	10. 15	·1151					
15. 28	48. 35	10. 31	·1156					
15. 35	48. 35	10. 50	·1143					
15. 42	47. 25	11. 0	·1142					
	***	11. 32	·1146					
16. 6	49. 0	11. 42	·1145					
	***	11. 52	·1148					
17. 5	50. 15	12. 2	·1146					
17. 22	51. 55	12. 13	·1153					
17. 25	51. 55	12. 20	·1150					
17. 41	50. 50	13. 1	·1149					
18. 7	50. 0	13. 31	·1143					
18. 15	51. 0	14. 11	·1152					
18. 22	49. 0	14. 38	·1149					
18. 30	51. 0	15. 16	·1164					
18. 40	49. 10	15. 26	·1166					
	***	15. 35	·1162					
19. 52	49. 15	15. 52	·1164					
20. 3	50. 30	16. 11	·1163					
20. 15	50. 10	16. 22	·1169					
20. 23	50. 30	17. 1	·1158					
	***	17. 14	·1162					
20. 45	49. 0	17. 36	·1156					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov.17	
h m	° ′ ″
21. 3	20. 50. 0
	***
21. 56	49. 0
	***
22. 12	54. 30
	***
23. 2	54. 0
23. 15	59. 10
23. 30	53. 40
23. 37	53. 25
23. 44	51. 5
23. 59	51. 0
Nov.18	
0. 0	20. 51. 10
0. 29	59. 0
0. 48	54. 30
1. 5	57. 55
1. 19	57. 30
1. 36	53. 50
1. 46	57. 5
1. 54	56. 30
2. 9:	53. 50
2. 25	55. 50
2. 40	48. 40
2. 52:	50. 20
3. 5	50. 0
3. 36	53. 0
3. 55	51. 55
4. 26	53. 30
4. 37	51. 40
5. 0	31. 0
5. 23	45. 0
5. 29	43. 10
5. 44	49. 0
5. 52	44. 0
6. 8	47. 30
6. 15	47. 20
6. 54	50. 0
7. 2	49. 30
7. 14	50. 0
7. 44	48. 35
8. 7	36. 0
8. 13	35. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov.17	
h m	
17. 44	·1161
17. 55	·1158
18. 5	·1160
18. 14	·1154
18. 18	·1161
18. 30	·1159
19. 22	·1156
	***
20. 11	·1158
20. 37	·1147
21. 18:	·1137
21. 56	·1156
22. 7	·1143
22. 30	·1137
22. 37	·1123
22. 43	·1132
22. 47	·1128
22. 50	·1141
22. 52	·1134
23. 7	·1142
23. 22	·1128
23. 30	·1139
23. 37	·1132
23. 45	·1135
23. 47	·1142
	(†)
Nov.18	
	(†)
0. 3	·1150
	***
0. 23	·1150
0. 29	·1155
0. 41	·1135
0. 53	·1133
1. 5	·1141
1. 32	·1136
1. 49	·1156
2. 7	·1159
2. 12	·1154
2. 28	·1147
2. 38	·1117
2. 52	·1129
3. 37	·1146
3. 52	·1140
4. 1	·1148
4. 22	·1153
4. 40	·1140
4. 52	·1119
5. 0	·1116
5. 28	·1171
5. 42	·1144
5. 47	·1150
6. 2	·1127
6. 18	·1146
6. 25	·1142
6. 35	·1146
6. 46	·1141

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov.18	
0. 0	·02803
0. 9	·02796
0. 28	·02820
0. 42	·02802
1. 3	·02818
1. 38	·02805
1. 45	·02828
3. 12	·02712
3. 48	·02610
4. 42	·02542
4. 58	·02576
5. 27	·02468
5. 50	·02422
7. 4	·02357
8. 2	·02340
8. 49	·02345
9. 43	·02278
9. 59	·02297
12. 15	·02340
14. 32	·02364
20. 37	·02492
22. 18	·02553
23. 59	·02552

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov.18		
1. 0	45 ·5	46 ·5
2. 0	48 ·0	48 ·7
3. 0	48 ·0	49 ·0
9. 0	48 ·6	49 ·0
21. 0	45 ·5	47 ·0
22. 0	45 ·8	47 ·0
23. 0	46 ·0	47 ·2

Greenwich Mean Solar Time.	Western Declination.
Nov.18	
h m	° ′ ″
8. 29	20. 23. 0
8. 46	22. 0
9. 8	37. 0
9. 16	38. 10
9. 38	45. 20
9. 57	39. 55
10. 4	43. 30
10. 15	41. 30
10. 33	44. 15
10. 40	43. 20
11. 3	47. 0
11. 8	47. 0
11. 12	48. 0
11. 18	46. 10
11. 30	46. 30
11. 56	40. 10
12. 35	52. 0
12. 40	51. 25
12. 45	52. 50
13. 10	53. 40
13. 25	51. 0
	***
13. 45	51. 10
14. 10	53. 0
14. 58	51. 0
15. 15	51. 10
15. 30	50. 20
15. 35	51. 0
15. 45	50. 45
15. 55	51. 0
16. 8	50. 10
16. 21	50. 55
16. 27	50. 30
	***
16. 52	51. 0
17. 9	50. 25
17. 13	51. 20
17. 30	49. 55
17. 40	50. 30
17. 50	50. 10
	***
18. 16	51. 0
18. 28	50. 40
18. 45	52. 0
19. 7	50. 20
	***
19. 26	51. 20
	***
19. 40	50. 30
20. 10	51. 50
	***
20. 48	49. 35
21. 28	49. 10
	***
21. 44	49. 50
	***
21. 55	48. 50
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov.18	
h m	
6. 54	·1148
7. 1	·1142
7. 11	·1138
7. 22	·1140
7. 37	·1136
7. 47	·1138
8. 2	·1136
8. 16	·1126
8. 55	·1161
9. 10	·1184
9. 27	·1165
9. 32	·1166
9. 55	·1124
10. 7	·1137
10. 14	·1130
10. 30	·1138
10. 42	·1134
10. 55	·1133
11. 1	·1134
11. 10	·1126
	***
11. 46	·1132
	***
12. 8	·1126
12. 22	·1130
12. 29	·1125
12. 37	·1142
12. 55	·1144
13. 16	·1138
	***
14. 10	·1144
14. 23	·1141
14. 37	·1145
14. 57	·1145
	***
15. 22	·1149
	***
15. 44	·1150
	***
15. 49	·1152
	***
16. 46	·1148
	***
17. 38	·1151
18. 1	·1147
	***
19. 10	·1141
	***
19. 14	·1147
	***
19. 38	·1135
	***
19. 46	·1140
20. 7	·1139
	***
20. 46	·1115
20. 58	·1123
21. 37	·1138
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Nov. 18	
h m	° ′ ″
22. 42	20. 50. 30
23. 14	52. 25
23. 31	51. 0
23. 43	51. 0
23. 55	53. 20
23. 59	52. 35
Nov. 19	
0. 0	20. 52. 30
	***
0. 23	53. 0
1. 0	50. 0
1. 28	50. 30
1. 35	51. 30
1. 56	50. 30
2. 2	51. 10
2. 12	50. 40
2. 19	51. 0
2. 33	50. 0
2. 46	51. 40
3. 0	51. 10
3. 14	51. 30
3. 21	50. 0
3. 48	31. 0
4. 25	49. 0
4. 45	51. 40
5. 0	50. 30
5. 10	50. 55
	***
7. 5	46. 35
7. 12	46. 40
7. 49	36. 30
8. 25	46. 40
8. 45	45. 35
8. 57	46. 20
9. 20	45. 0
9. 29	45. 15
9. 45	30. 35
10. 28	47. 0
11. 8:	44. 30
11. 43:	50. 10
12. 28	44. 20
12. 45	45. 20
13. 4	44. 50
13. 28	45. 30
13. 35	47. 0
13. 52	47. 10
14. 12	48. 10
14. 30	49. 20
14. 57	50. 30
15. 26	49. 0
15. 33	50. 15
15. 46	50. 40
	***
16. 4	52. 25
	***
16. 15	52. 35
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 18	
h m	
23. 5	·1143
	***
23. 43	·1142
23. 55	·1149
23. 59	·1147
Nov. 19	
0. 0	·1147
0. 4	·1142
0. 7	·1133
0. 39	·1118
0. 49	·1124
0. 53	·1121
1. 5	·1127
1. 49	·1142
2. 2	·1132
2. 12	·1137
2. 37	·1136
2. 52	·1147
3. 14	·1127
3. 21	·1136
3. 40	·1124
3. 52	·1135
4. 9	·1140
4. 23	·1152
4. 36	·1146
4. 58	·1144
5. 8	·1152
5. 17	·1149
5. 43	·1153
5. 50	·1151
5. 57	·1153
6. 22	·1154
6. 43	·1150
7. 0	·1153
7. 28:	·1144
8. 8	·1183
8. 23	·1182
8. 36	·1168
8. 53	·1162
9. 7	·1154
9. 22	·1153
9. 38	·1142
9. 56	·1148
10. 7	·1147
10. 29	·1150
10. 51	·1154
11. 0	·1159
11. 8	·1158
11. 18	·1163
11. 43:	·1156
12. 10	·1170
12. 38	·1163
13. 5	·1152
13. 23	·1154
13. 35	·1153
14. 7	·1153

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 19	
h m	
0. 0	·02552
1. 31	·02547
1. 57	·02526
	·02792
3. 31	·02738
3. 59	·02760
4. 56	·02637
6. 7	·02578
8. 2	·02577
8. 35	·02550
9. 37	·02558
10. 7	·02580
11. 28	·02595
12. 0	·02570
15. 52	·02603
16. 0	·02622
17. 44	·02683
22. 5	·02937
	·02555
23. 59	·02516

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 19		
h m	°	°
0. 0	46 ·8	47 ·9
1. 0	47 ·2	48 ·0
2. 0	48 ·0	48 ·7
3. 0	48 ·4	49 ·0
6. 0	48 ·2	49 ·0
9. 0	47 ·2	48 ·3
12. 0	46 ·9	47 ·8
18. 0	40 ·0	41 ·0
21. 0	41 ·5	43 ·9
22. 0	42 ·0	43 ·9
23. 0	42 ·6	44 ·0

Greenwich Mean Solar Time.	Western Declination.
Nov. 19	
h m	° ′ ″
16. 48	20. 52. 55
	***
17. 30	51. 0
	***
18. 3	51. 30
18. 17	51. 20
18. 44	51. 50
19. 0	51. 0
19. 8	51. 40
19. 19	51. 0
19. 29	51. 30
19. 37	51. 10
19. 45	51. 50
20. 0	50. 50
20. 27	52. 45
20. 56	52. 0
21. 20	50. 0
21. 39	50. 10
21. 55	51. 30
22. 19	56. 35
	***
23. 7	57. 30
	***
23. 51	57. 0
23. 59	56. 10
Nov. 20	
0. 0	20. 56. 10
0. 10	55. 0
0. 30	55. 0
0. 40	54. 0
0. 49	53. 50
1. 0	53. 10
1. 3	54. 0
1. 27	54. 5
2. 26	52. 10
2. 33	52. 50
2. 59	52. 0
3. 10	52. 50
3. 47	43. 30
4. 3	41. 30
4. 17	43. 55
4. 31	48. 30
4. 50	49. 30
4. 59	49. 20
5. 24:	51. 25
5. 59	49. 30
6. 17	50. 30
6. 41	35. 40
6. 47	36. 0
7. 5	43. 0
7. 12	43. 0
7. 19	44. 50
7. 30	44. 30
7. 40	45. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 19	
h m	
14. 58	·1156
15. 29	·1143
16. 18	·1162
16. 29	·1159
16. 42	·1163
17. 29	·1167
18. 1	·1159
18. 13	·1160
18. 30	·1154
18. 38	·1157
18. 46	·1154
18. 56	·1158
19. 7	·1155
19. 48	·1156
20. 15	·1148
20. 41	·1151
21. 15	·1145
	***
21. 34	·1145
21. 41	·1149
21. 50	·1145
	***
22. 30	·1145
	***
22. 54:	·1149
	***
23. 23	·1138
	(†)
Nov. 20	
0. 0	(†)
0. 46	·1139
1. 11	·1142
1. 38	·1155
2. 41	·1151
3. 17	·1151
3. 47	·1126
4. 3	·1135
4. 19	·1135
4. 37	·1146
4. 49	·1144
4. 59	·1150
5. 19	·1155
5. 46	·1155
6. 9	·1160
6. 39	·1144
6. 48	·1161
7. 2	·1179
7. 12	·1170
7. 18	·1170
7. 27	·1158
7. 36	·1159
7. 45	·1158
8. 9:	·1146
8. 30	·1149
8. 37	·1148
8. 45	·1151
9. 14	·1149

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 20	
0. 0	·02516
1. 24	·02502
3. 25	·02380
4. 0	·02380
5. 37	·02242
6. 25	·02243
6. 46	·02278
7. 22	·02272
9. 1	·02315
	·02923
10. 52	·02950
11. 51	·02920
13. 16	·02904
21. 18	·03022
23. 59	·03110

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	
Nov. 20		
0. 0	43 ·5	44 ·3
1. 0	44 ·3	45 ·0
2. 0	45 ·5	46 ·3
3. 0	46 ·9	47 ·3
9. 0	47 ·6	48 ·6
21. 0	45 ·0	46 ·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 20	
h m	° ′ ″
7. 51	20. 49. 0
8. 19	49. 20
8. 27	49. 0
8. 43	50. 0
9. 2	49. 10
9. 57	50. 0
10. 30	48. 50
10. 45	49. 20
10. 55	49. 0
11. 3	50. 20
11. 47	47. 0
12. 10	48. 10
12. 23	48. 0
12. 32	49. 10
12. 43	49. 10
12. 58	49. 50
14. 17:	47. 5
14. 55	50. 50
15. 15	50. 0
15. 45	51. 30
16. 16	50. 30
16. 51	51. 0
17. 44	49. 50
18. 0	50. 30
18. 24	50. 10
18. 38	51. 0
18. 50	51. 0
19. 10	52. 30
19. 39	51. 55
20. 15	54. 30
20. 45	50. 55
20. 52	50. 30
21. 6	48. 30
21. 21	48. 40
21. 33	51. 30
22. 11	51. 10
22. 26	49. 20
23. 30	49. 35
23. 45	54. 35
23. 53	51. 45
23. 57	53. 45
23. 59	53. 20
Nov. 21	
0. 0	20. 53. 15
0. 10	55. 0
0. 28	53. 10
0. 36	53. 30
1. 8	52. 0
1. 34	54. 10
1. 54	55. 0
2. 3	54. 0
2. 15	50. 20
2. 31	49. 0
3. 18	53. 50
3. 30	53. 50
4. 7	49. 55
4. 15	49. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 20	
h m	
9. 26	·1149
9. 50	·1156
10. 9	·1152
10. 17	·1154
10. 42	·1152
10. 59	·1156
11. 13	·1158
11. 23	·1162
11. 39	·1163
11. 57:	·1154
12. 20	·1164
12. 32	·1163
12. 48	·1164
13. 30:	·1156
14. 9	·1157
14. 53	·1154
15. 14	·1148
15. 59	·1155
16. 5	·1154
16. 17	·1159
16. 37	·1163
17. 21	·1159
17. 36	·1160
18. 7	·1158
18. 29	·1160
18. 45	·1157
19. 4	·1156
19. 36	·1142
20. 5	·1146
20. 16	·1154
20. 30	·1155
21. 4	·1151
21. 27	·1155
21. 45	·1152
22. 5	·1153
22. 29	·1150
22. 44	·1150
23. 0	·1145
23. 25	·1149
23. 38	·1155
23. 59	·1145
Nov. 21	
0. 0	·1145
1. 4	·1143
1. 41	·1150
2. 9	·1132
3. 7	·1150
3. 22	·1143
3. 58	·1143
4. 20	·1151
4. 52	·1140
5. 19	·1161
5. 37	·1155
6. 36	·1150
7. 39	·1155
8. 7	·1155

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 21	
0. 0	·03110
2. 31	·03062
4. 26	·02943
	·03060
5. 24	·03015
6. 16	·02962
	·03020
9. 12	·02938
10. 12	·02956
11. 42	·02925
13. 36	·02956
13. 58	·02954
16. 2	·03016
19. 45:	·03197

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 21		
1. 0	47 ·0	47 ·7
3. 0	48 ·4	48 ·8
9. 0	48 ·2	49 ·0
21. 0	42 ·5	44 ·9

Greenwich Mean Solar Time.	Western Declination.
Nov. 21	
h m	° ′ ″
4. 34	20. 48. 10
4. 42	48. 10
5. 0	43. 0
5. 12	43. 0
5. 32	48. 30
5. 53	48. 20
6. 35	49. 50
6. 52	48. 55
7. 35	48. 10
7. 57	46. 0
8. 19	45. 10
8. 30	46. 0
9. 15	38. 40
10. 1	45. 0
10. 15	51. 40
10. 42	48. 35
10. 57	49. 30
11. 14	47. 50
11. 48	44. 30
12. 36	48. 40
12. 45	50. 0
12. 55	49. 30
13. 11	50. 30
13. 27	49. 40
13. 45	49. 30
13. 56	51. 0
14. 38	54. 0
14. 59	53. 0
15. 10	51. 40
15. 22	51. 25
15. 33	49. 40
16. 0	48. 10
16. 22	50. 10
17. 8	50. 0
17. 16	50. 30
17. 29	50. 0
18. 46	50. 30
18. 59	50. 5
19. 18	51. 30
19. 43	49. 55
19. 49	50. 5
19. 57	50. 0
20. 16	51. 0
21. 57	47. 10
22. 10:	46. 30
22. 44	50. 55
22. 48	50. 35
22. 57	51. 30
23. 4	51. 0
23. 59	55. 10
Nov. 22	
0. 0	20. 55. 40
0. 12	54. 20
0. 24	53. 50
1. 0	53. 55
1. 19	53. 25
1. 45	53. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 21	
h m	
8. 17	·1158
8. 55	·1148
9. 9	·1148
9. 26	·1143
9. 40	·1145
10. 13	·1142
10. 37	·1164
11. 11	·1160
11. 36	·1152
11. 52	·1153
12. 7	·1150
13. 12	·1153
13. 30	·1162
14. 20	·1143
14. 52	·1152
15. 4	·1153
15. 41	·1160
16. 41	·1159
17. 37	·1165
18. 15	·1164
18. 37	·1159
18. 56	·1160
19. 8	·1152
19. 41	·1154
19. 58	·1158
20. 59	·1157
21. 28	·1155
21. 47	·1156
22. 36	·1154
23. 12	·1147
23. 39	·1153
23. 59	·1156
Nov. 22	
0. 0	·1156
0. 12	·1151
0. 23	·1149
0. 41	·1153
1. 7	·1155
1. 16	·1153

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 21	
h m	
22. 55	·03110
23. 59	·03116
Nov. 22	
0. 0	·03116
1. 6	·03105
	·02648
3. 6	·02520
4. 18	·02397
5. 4	·02364

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 22		
1. 0	45 ·7	46 ·9
3. 0	47 ·8	48 ·8
9. 0	46 ·9	48 ·0
21. 30	37 ·3	40 ·3

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 22		Nov. 22		Nov. 22				
h m	° ′ ″	h m		h m		h m	°	°
1. 48	20. 54. 5	1. 34	·1154	7. 36	·02442			
2. 3	52. 25	1. 45	·1150	8. 28	{·02440 ·02544}			
2. 8	52. 30	1. 53	·1153					
2. 54	48. 25	2. 0	·1143	8. 57	{·02538 ·02570}			
3. 7	50. 25	2. 28	·1136					
3. 15	50. 20	2. 34	·1140	10. 7	·02573			
3. 41	53. 0	2. 48	·1140	12. 41	·02642			
3. 47	52. 30	3. 4	·1148	20. 2	·03034			
4. 7	52. 30	3. 20	·1149	23. 59	·02820			
4. 15	51. 40	3. 32	·1144					
4. 20	51. 35	3. 46	·1140					
4. 56	45. 0	4. 15	·1141					
5. 3	46. 30	4. 23	·1144					
5. 15	45. 0	4. 30	·1139					
5. 28	47. 30	4. 35	·1140					
6. 1	52. 30	4. 40	·1137					
6. 18	53. 0	5. 2	·1150					
6. 43	52. 30	5. 12	·1150					
7. 2	52. 30	5. 30	·1155					
7. 18	51. 35	5. 58	·1150					
7. 30	51. 40	6. 17	·1150					
7. 38	50. 30	6. 35	·1143					
8. 2	44. 30	6. 46	·1144					
8. 11	44. 30	7. 8	·1141					
8. 36	49. 50	7. 38	·1140					
8. 58	50. 25	8. 1	·1149					
9. 13	50. 0	8. 17	·1162					
9. 55	50. 10	8. 43	·1148					
10. 3	51. 0	9. 12	·1144					
10. 14	50. 50	9. 38	·1143					
10. 23	51. 10	9. 51	·1146					
10. 32	50. 30	10. 1	·1144					
13. 53	52. 40	10. 15	·1146					
14. 5	52. 0	10. 45	·1146					
15. 34	53. 0	11. 7	·1152					
16. 10	52. 10	11. 25	·1150					
16. 31	53. 15	12. 29	·1151					
17. 4	51. 55	12. 37	·1154					
18. 8	53. 0	13. 52	·1154					
18. 30	51. 45	14. 2	·1157					
19. 27	51. 35	14. 52	·1157					
19. 35	52. 25	15. 16	·1159					
20. 0	52. 30	15. 30	·1157					
20. 11	51. 50	15. 38	·1160					
20. 47	50. 20	16. 57	·1162					
21. 32	49. 15	17. 37	·1165					
22. 3	49. 50	18. 23	·1170					
22. 15	51. 30	18. 31	·1166					
22. 24	51. 25	18. 53	·1164					
22. 29	52. 35	19. 4	·1161					
22. 45	52. 30	19. 36	·1162					
22. 52	51. 0	20. 8	·1163					
23. 21	53. 20	20. 15	·1165					
23. 59	52. 0	20. 24	·1162					
		20. 30	·1164					
		20. 41	·1161					
		20. 50	·1162					
		20. 58	·1160					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Nov. 22						
h m	° ′ ″	h m		h m		h m	°	°
		21. 20	·1157					
		21. 27	·1154					
		21. 41	·1154					
		22. 20	·1142					
		22. 33	·1138					
		22. 39	·1142					
		22. 45	·1141					
		22. 57	·1146					
		23. 26	·1147					
		23. 56	·1147					
		23. 59	·1147					
Nov. 23		Nov. 23		Nov. 23		Nov. 23		
0. 0	20. 52. 0	0. 0	·1147	0. 0	·02820	9. 0	39 ·0	41 ·8
0. 20	53. 15	0. 16	·1150	1. 7	·02702	21. 0	36 ·8	39 ·0
0. 30	52. 35	1. 1	·1150	1. 45	{·02770 ·02712}			
0. 52	51. 55	1. 46	·1159					
1. 10	53. 0	2. 4	·1159	2. 33	·02710			
1. 18	52. 50	2. 21	·1156	3. 16	·02688			
1. 46	54. 30	2. 52	·1150	3. 55	·02694			
2. 33	55. 0	3. 16	·1148	4. 31	·02657			
2. 57	52. 35	3. 48	·1156	6. 34	·02600			
3. 12	52. 45	5. 30	·1157	7. 0	·02[illegible]			
3. 28	51. 30	5. 37	·1154	7. 27	·02572			
4. 8	54. 0	6. 0	·1164	10. 1	·02545			
4. 43	50. 30	6. 22	·1148	12. 48	·02587			
4. 57	51. 0	6. 30	·1155	15. 30	·02683			
5. 25	50. 55	6. 46	·1184	21. 15	·02482			
5. 47	47. 45	7. 1	·1165	22. 33	{·02[illegible]62 ·02[illegible]41}			
6. 8	49. 35	7. 26	·1160					
6. 39	36. 30	7. 37	·1154	23. 59	·02380			
7. 0	46. 0	8. 6	·1152					
7. 18	44. 10	8. 26	·1155					
8. 15	49. 0	8. 36	·1154					
8. 48	50. 0	9. 16	·1163					
9. 12	49. 45	9. 28	·1159					
9. 23	50. 15	9. 42	·1162					
10. 2	48. 55	9. 53	·1160					
10. 14	49. 10	10. 5	·1162					
11. 2	48. 10	10. 20	·1160					
12. 3	50. 30	10. 32	·1161					
12. 40	49. 35	10. 45	·1159					
13. 25	50. 30	11. 5	·1163					
13. 45	49. 40	11. 24	·1160					
14. 0	50. 55	11. 35	·1162					
14. 23	50. 10	11. 41	·1160					
14. 44	51. 30	11. 53	·1162					
15. 38	49. 0	12. 0	·1164					
16. 23	48. 50	12. 8	·1161					
17. 13	49. 30	12. 16	·1163					
17. 44	48. 30	12. 59	·1164					
18. 31	49. 40	13. 16	·1162					
19. 46	49. 30	13. 34	·1164					
20. 49	47. 55	13. 47	·1163					
21. 16	48. 40	14. 22	·1168					
21. 47	47. 0	14. 35	·1166					
22. 11	49. 50	14. 46	·1169					
22. 33	49. 30	15. 3	·1167					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 23		Nov. 23						
h m	° ′ ″	h m		h m		h m	°	°
22. 49	20. 52. 15	15. 37	·1170					
23. 29	53. 10	16. 7	·1172					
23. 43	51. 50	16. 22	·1169					
23. 48	53. 0	17. 8	·1171					
23. 59	52. 50	17. 26	·1173					
		18. 22	·1170					
		18. 53	·1172					
		19. 22	·1172					
		19. 24	·1169					
		19. 43	·1170					
		20. 15	·1163					
		21. 10	·1166					
		22. 23	·1154					
		23. 18	·1155					
		23. 45	·1154					
			(†)					
Nov. 24		Nov. 24		Nov. 24		Nov. 24		
0. 0	20. 52. 40		(†)	0. 0	·02380	1. 0	41 ·0	43 ·0
0. 3	52. 35	1. 0	·1155*	2. 29	·02236	3. 0	43 ·9	45 ·2
0. 30	52. 50	1. 3	·1152	4. 17	·01990	9. 0	44 ·5	45 ·5
0. 53	51. 40	1. 40	·1152	6. 23	·01772	21. 0	39 ·2	41 ·0
1. 39	52. 55	2. 11	·1157	7. 37	·01767			
2. 29	50. 0	2. 47	·1156	8. 57	·01795			
2. 41	50. 40	3. 1	·1159	11. 23	·01804			
2. 50	49. 30	3. 25	·1156	17. 38	·01966			
3. 1	50. 0	3. 32	·1162	23. 14	·02158			
3. 6	49. 25	3. 42	·1163	23. 59	·02156			
3. 16	49. 30	4. 27	·1152					
3. 25	48. 40	4. 47	·1158					
3. 35	49. 20	5. 0	·1157					
3. 50	51. 20	5. 52	·1163					
4. 28	50. 0	6. 40	·1160					
4. 51	51. 50	7. 9	·1154					
6. 3	49. 50	7. 16	·1156					
7. 3	50. 50	7. 33	·1156					
7. 12	50. 25	7. 46	·1149					
7. 27	50. 30	7. 59	·1156					
7. 57	42. 40	8. 8	·1155					
8. 45	49. 30	8. 25	·1151					
9. 49	49. 0	8. 46	·1156					
10. 13	50. 0	9. 0	·1158					
12. 6	49. 30	9. 16	·1154					
12. 45	50. 35	9. 30	·1154					
15. 15	51. 0	9. 43	·1157					
15. 43	52. 20	10. 4	·1159					
16. 15	51. 0	10. 26	·1156					
17. 8	50. 15	10. 45	·1159					
17. 28	51. 0	12. 1	·1158					
17. 45	50. 20	13. 56	·1162					
20. 7	51. 45	14. 12	·1164					
20. 57	48. 40	15. 7	·1165					
21. 22	48. 40	15. 41	·1164					
22. 15	50. 55	16. 15	·1168					
22. 27	49. 35	16. 53	·1171					
23. 11	49. 30	17. 32	·1169					
23. 59	51. 35	17. 54	·1170					
		18. 31	·1167					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 25		Nov. 24						
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 51. 40	19. 10	·1170					
0. 12	53. 0	22. 1	·1156					
0. 38	51. 40	22. 14	·1156					
0. 51	52. 0	22. 23	·1153					
1. 1	51. 40	22. 49	·1152					
1. 18	52. 5	23. 3	·1160					
1. 35	51. 0	23. 22	·1161					
2. 18	51. 15	23. 35	·1164					
3. 43	50. 30	23. 59	·1167					
3. 53	51. 10							
4. 46	51. 0	Nov. 25		Nov. 25		Nov. 25		
5. 16	50. 0	0. 0	·1169	0. 0	·02156	1. 0	43 ·0	43 ·8
7. 46	50. 40	0. 14	·1162	1. 41	·02080	3. 0	45 ·5	46 ·0
8. 14	49. 40	0. 18	·1160	2. 50	·01982	9. 0	47 ·0	47 ·5
8. 35	50. 35	0. 33	·1157		·02366	21. 0	44 ·7	46 ·0
9. 12	48. 55	0. 43	·1160	5. 25	·02177	22. 0	44 ·8	46 ·0
9. 28	50. 0	1. 25	·1156	6. 21	·02170	23. 0	45 ·4	46 ·8
11. 32	50. 15	1. 44	·1162	9. 5	·02242			
11. 57	49. 30	2. 39	·1163	9. 21	·02257			
12. 23	51. 30	3. 46	·1162	12. 20	·02278			
12. 48	50. 20	4. 1	·1168	12. 44	·02270			
13. 30	50. 10	4. 12	·1165	22. 20	·02367			
13. 50	50. 30	4. 32	·1166	23. 59	·02320			
14. 15	50. 0	5. 1	·1164					
16. 38	50. 40	5. 9	·1167					
17. 47	49. 25	6. 13	·1169					
18. 16	50. 30	7. 28	·1164					
	***	7. 45	·1165					
21. 0	48. 20	8. 4	·1160					
21. 23	47. 0	8. 13	·1160					
22. 16	47. 10	8. 45	·1154					
23. 7	48. 10	9. 7	·1156					
23. 17	49. 35	9. 23	·1159					
23. 59	50. 35	9. 55	·1158					
		11. 23	·1157					
		11. 33	·1159					
		11. 47	·1158					
		12. 8	·1166					
		12. 39	·1162					
		13. 13	·1160					
		15. 0	·1164					
		16. 38	·1167					
		17. 24	·1164					
		17. 36	·1165					
		17. 48	·1164					
		18. 9	·1167					
		18. 57	·1164					
		19. 1	·1166					
		19. 25	·1163					
		19. 36	·1159					
		19. 52	·1159					
		20. 27	·1153					
			***					
		21. 39	·1153					
			***					
		22. 27	·1158					
		22. 49	·1155					
		22. 50	·1158					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Nov. 26	
0. 0	20. 50. 0
0. 17	51. 45
0. 37	50. 40
1. 24	51. 15
2. 44	49. 25
3. 25	51. 0
5. 7	50. 20
6. 10	48. 10
7. 17	49. 50
8. 0	46. 0
8. 23	48. 40
8. 50	47. 40
9. 0	48. 0
9. 27	46. 50
9. 43	47. 30
10. 15	46. 0
10. 58	36. 30
11. 15	38. 30
11. 27	38. 40
11. 50	43. 50
11. 55	44. 0
12. 2	45. 0
12. 47	46. 30
13. 16	46. 20
13. 33	47. 20
14. 30	48. 0
14. 45	48. 30
14. 57	46. 30
15. 0	48. 40
15. 15	47. 0
15. 35	49. 0
16. 1	47. 20
17. 0	51. 0
17. 12	51. 0
17. 35	49. 55
17. 58	50. 40
18. 15	50. 10
18. 47	50. 40
19. 18	53. 35
20. 28	49. 10
20. 57	49. 45
21. 8	51. 50
21. 29	51. 0
21. 50	52. 10
22. 0	51. 40
22. 14	52. 0
22. 36	51. 0
	***
23. 59	54. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 25	
h m	
23. 13	·1156
23. 44	·1153
	***
23. 59	·1153
Nov. 26	
0. 0	·1153
	***
0. 52	·1153
1. 48	·1162
2. 46	·1153
3. 8	·1158
3. 17	·1156
3. 52	·1157
4. 0	·1154
4. 17	·1158
4. 30	·1156
5. 12	·1158
5. 22	·1157
6. 32	·1160
7. 22	·1154
7. 38	·1148
7. 47	·1150
8. 4	·1147
8. 21	·1158
8. 37	·1147
9. 5	·1147
9. 9	·1145
9. 30	·1145
9. 38	·1147
10. 0	·1146
10. 16	·1153
10. 37	·1146
11. 4	·1157
11. 35	·1146
11. 43	·1146
12. 0	·1142
12. 5	·1146
12. 30	·1147
12. 38	·1145
13. 5	·1150
13. 35	·1150
13. 45	·1154
14. 19	·1151
14. 32	·1155
14. 47	·1152
14. 54	·1154
15. 6	·1152
16. 17	·1162
16. 36	·1161
16. 51	·1165
17. 0	·1162
17. 8	·1164
17. 15	·1162
17. 23	·1166
17. 38	·1167
17. 46	·1170

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 26	
0. 0	·02320
1. 48	·02267
2. 53	·02343
	·02948
5. 15	·02853
6. 39	·02830
	·02902
8. 8	·02867
9. 41	·02836
	·02922
11. 28	·02873
12. 1	·02878
	·02922
14. 0	·02920
15. 11	·02956
18. 26	·03155
20. 30	·03242
22. 31	·03197
23. 59	·03164

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 26		
0. 0	46 ·5	47 ·2
1. 0	47 ·3	47 ·8
2. 0	48 ·0	48 ·5
3. 0	49 ·1	49 ·3
6. 0	49 ·6	50 ·0
9. 0	49 ·4	50 ·0
12. 0	48 ·4	49 ·3
18. 0	44 ·7	46 ·2
21. 0	44 ·5	46 ·0
22. 0	45 ·0	46 ·0
23. 0	46 ·0	47 ·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Nov. 27	
0. 0	20. 55. 0
0. 19	56. 40
0. 30	55. 15
0. 33	56. 20
1. 18	52. 50
1. 43	54. 0
2. 5	52. 30
2. 14	53. 20
2. 26	52. 30
2. 49	53. 20
3. 8	52. 0
3. 17	53. 20
3. 31	52. 10
3. 44	49. 30
3. 53	48. 20
4. 0	44. 30
4. 32	51. 30
4. 39	51. 10
4. 48	54. 5
5. 0	53. 20
5. 8	51. 10
5. 15	54. 30
5. 28	48. 25
5. 33	48. 0
5. 46	35. 10
6. 8	53. 0
6. 29	41. 0
6. 41	50. 50
6. 50	50. 10
7. 7	53. 15
7. 27	48. 10
7. 35	49. 50
7. 53	48. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 26	
h m	
17. 51	·1169
17. 58	·1172
18. 31	·1172
19. 4	·1170
19. 8	·1168
19. 32	·1170
20. 27	·1167
21. 1	·1169
21. 7	·1173
21. 22	·1169
21. 37	·1170
22. 1	·1162
22. 16	·1160
22. 38	·1150
22. 49	·1151
22. 58	·1149
23. 14	·1152
23. 23	·1155
23. 30	·1152
23. 33	·1155
23. 41	·1149
23. 46	·1150
23. 59	·1136
Nov. 27	
0. 0	·1136
0. 45	·1146
1. 24	·1137
1. 33	·1141
1. 58	·1151
2. 1	·1148
2. 14	·1153
2. 22	·1150
2. 39	·1157
3. 9	·1160
3. 19	·1158
3. 38	·1136
3. 49	·1136
3. 57	·1130
4. 7	·1141
4. 11	·1140
4. 28	·1151
4. 38	·1146
4. 43	·1149
4. 58	·1137
5. 0	·1139
5. 7	·1133
5. 16	·1145
5. 25	·1125
5. 30	·1128
5. 38	·1121
5. 52	·1162
6. 0	·1158
6. 2	·1169
6. 23	·1120
6. 35	·1149
6. 47	·1129
6. 59	·1125

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 27	
0. 0	·03164
1. 9	·03157
2. 0	·03100
2. 52	·03022
	·02758
4. 11	·02658
4. 50	·02583
5. 4	·02577
5. 10	·02550
5. 41	·02562
6. 9	·02483
	·02555
6. 26	·02567
6. 41	·02548
7. 15	·02557
7. 20	·02612
8. 31	·02605
9. 18	·02566
13. 21	·02663
15. 7	·02700
16. 28	·02798
19. 36	·02950
23. 9	·03097
	·02876
23. 59	·02874

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 27		
0. 0	47 ·2	47 ·9
1. 0	47 ·9	48 ·5
2. 0	49 ·2	49 ·8
3. 0	50 ·4	51 ·0
9. 0	51 ·0	50 ·8
21. 0	45 ·5	46 ·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 27		Nov. 27						
h m	° ′ ″	h m		h m		h m	°	°
8. 17	20. 38. 15	7. 13	·1108					
8. 31	43. 25	7. 31	·1121					
9. 6	37. 35	7. 42	·1114					
9. 20	41. 30	7. 46	·1116					
9. 30	39. 10	7. 53	·1109					
9. 48	44. 30	7. 55	·1112					
9. 58	44. 40	8. 3	·1107					
10. 15	48. 10	8. 10	·1118					
	***	8. 31	·1124					
11. 9	47. 10	8. 45	·1125					
11. 54	49. 0	9. 2	·1141					
12. 3	50. 30	9. 16	·1125					
12. 36	51. 10	9. 32	·1139					
12. 59	51. 15	9. 40	·1132					
13. 27:	54. 0	9. 52	·1137					
13. 56	52. 50	10. 10	·1130					
14. 5	53. 0	11. 1	·1135					
14. 28	57. 50	11. 13	·1133					
15. 7	51. 55	11. 26	·1136					
15. 42	50. 0	11. 47	·1135					
16. 47	50. 50	11. 58	·1139					
17. 7	51. 45	13. 7	·1138					
17. 22	50. 55	13. 24	·1146					
	***	14. 4	·1143					
19. 13	52. 0	14. 31	·1151					
19. 39	51. 0	14. 53	·1154					
19. 50	51. 30	15. 8	·1148					
23. 3	51. 15	15. 22	·1150					
23. 59	52. 30	15. 49	·1150					
		16. 11:	·1156					
		16. 37	·1151					
		17. 10	·1153					
		18. 26	·1150					
		18. 52	·1153					
		19. 5	·1147					
		20. 19	·1145					
		20. 38	·1150					
		21. 2	·1151					
		21. 18	·1153					
		21. 54	·1152					
		22. 37	·1148					
		23. 49	·1138					
		23. 59	·1137					
Nov. 28		Nov. 28		Nov. 28		Nov. 28		
0. 0	20. 52. 30	0. 0	·1137	0. 0	·02874	1. 0	48 ·8	49 ·5
0. 45	53. 50	0. 32	·1136	2. 29	·02755	3. 0	51 ·2	51 ·4
0. 54	53. 40		(†)	5. 30	·02463	9. 0	52 ·0	52 ·5
1. 23	56. 0	1. 0	·1135*	6. 52	·02375	21. 0	47 ·9	49 ·0
1. 49	53. 0	1. 42	·1146	7. 30	·02362			
	***	2. 23	·1143	9. 49	·02402			
2. 12	53. 10	2. 48	·1144	11. 29	·02400			
	***	3. 0	·1140	12. 5	·02868			
2. 37	51. 0	3. 16	·1143	13. 33	·02422			
2. 48	45. 30	3. 30	·1140	13. 40	·02411			
3. 9	52. 0	4. 7	·1141	18. 6	·02576			
3. 15	47. 0	5. 22	·1148	23. 59	·02694			
3. 25	52. 25	6. 9	·1143					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 28		Nov. 28						
h m	° ′ ″	h m		h m		h m	°	°
3. 28	20. 51. 0	6. 25	·1145					
3. 38	51. 55	6. 40	·1143					
3. 52	51. 0	7. 2	·1135					
5. 37	52. 0	7. 20	·1147					
6. 42	50. 50	7. 38	·1141					
7. 36	48. 35	7. 47	·1142					
7. 57	50. 30	7. 58	·1140					
8. 19	51. 0	9. 21	·1143					
8. 57	50. 0	9. 25	·1144					
9. 33	50. 35	9. 38	·1142					
10. 30	49. 0	10. 1	·1147					
11. 14	50. 0	11. 20	·1144					
11. 30	51. 50	11. 35	·1161					
12. 8	46. 10	11. 50	·1160					
12. 43	50. 0	12. 8	·1145					
12. 48	54. 45	13. 1	·1139					
13. 21	56. 50	13. 17	·1146					
13. 57	52. 0	13. 26	·1154					
14. 14	51. 0	13. 32	·1149					
14. 25	48. 40	13. 52	·1160					
14. 33	50. 50	14. 8	·1154					
14. 59	49. 10	14. 22	·1158					
15. 30	51. 35	14. 31	·1154					
15. 46	51. 35	15. 0	·1151					
16. 0	50. 40	15. 37	·1156					
16. 12	51. 30	15. 46	·1154					
19. 7	52. 5	16. 1	·1160					
20. 43	51. 0	16. 11	·1159					
22. 2	51. 0	17. 49	·1162					
23. 18	52. 30	18. 22:	·1155					
23. 37	52. 0	18. 57	·1160					
23. 49	52. 25	19. 22	·1158					
23. 59	51. 25	19. 39	·1159					
		19. 46	·1156					
		19. 52	·1157					
		19. 58	·1154					
		20. 4	·1157					
		20. 39	·1151					
		21. 7	·1149					
		21. 23	·1146					
		22. 0	·1145					
		22. 29	·1145					
		22. 37	·1147					
		22. 56	·1141					
		23. 46	·1146					
		23. 59	·1146					
Nov. 29		Nov. 29		Nov. 29		Nov. 29		
0. 0	20. 51. 20	0. 0	·1146	0. 0	·02694	1. 0	49 ·7	50 ·1
0. 30	52. 25	0. 23	·1147	2. 17	·02637	3. 0	51 ·0	51 ·0
1. 9	52. 0	1. 9	·1143	7. 14:	·02458	9. 0	49 ·8	50 ·1
2. 40	49. 0	1. 34	1146	13. 22	·02577	22. 35	44 ·5	45 ·0
3. 20	51. 0	2. 8	·1150	17. 24	·02694			
6. 4	50. 25	2. 22	·1152	21. 3	·02772			
9. 3	50. 50	2. 59	·1148	23. 59	·02883			
10. 3	50. 20	3. 24	·1152					
12. 2	51. 5	3. 26	·1148					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Nov. 29	
h m	° ′ ″
12. 23	20. 51. 40
13. 7	49. 40
13. 41	50. 55
14. 8	50. 40
14. 32	51. 25
15. 10	50. 15
15. 40	50. 30
16. 46	49. 25
19. 44	50. 25
20. 26	51. 25
20. 51	51. 0
22. 1	52. 40
22. 15	52. 20
22. 20	52. 30
	(†)
23. 11	52. 40
23. 30	51. 50
23. 56	51. 50
23. 59	51. 55
Nov. 30	
0. 0	20. 52. 0
0. 14	51. 20
0. 45	51. 50
4. 0	50. 55
5. 5	51. 10
5. 16	50. 40
8. 45	49. 30
9. 0	48. 45
12. 59	49. 30
13. 45	51. 30
14. 30	40. 10
14. 41	42. 30
15. 5	36. 50
15. 14	37. 0
15. 30	36. 0
16. 26	44. 35
17. 57	48. 25
18. 22	47. 55
18. 33	48. 30
18. 41	48. 0
18. 57	48. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 29	
h m	
4. 20	·1147
5. 32	·1149
5. 47	·1148
6. 24	·1151
7. 50	·1149
8. 41	·1148
8. 58	·1147
9. 48	·1148
10. 15	·1151
11. 7	·1148
11. 41	·1149
11. 53	·1150
12. 13	·1151
12. 30	·1152
12. 35	·1154
12. 41	·1152
12. 46	·1154
13. 30	·1149
14. 6	·1152
14. 32	·1150
15. 5	·1154
15. 46	·1153
16. 35	·1159
18. 17	·1160
18. 45	·1163
19. 11	·1162
19. 47	·1158
19. 58	·1159
20. 7	·1156
21. 52	·1151
22. 0	·1154
22. 17	·1150
22. 30	·1151
	(†)
Nov. 30	
0. 0	·1152
0. 14	·1148
0. 21	·1151
0. 37	·1150
0. 45	·1154
1. 13	·1154
1. 23	·1153
1. 31	·1152
2. 8	·1154
2. 22	·1157
2. 47	·1158
2. 58	·1154
3. 8	·1157
4. 1	·1156
4. 15	·1161
5. 12	·1156
5. 23	·1158
6. 7	·1160
7. 5	·1159
7. 17	·1156
7. 30	·1158

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 30	
0. 0	.02883
1. 49	·02916
6. 41	·02828
9. 39	·02830
12. 4	·02805
13. 37	·02800
14. 26	·02752
14. 48	·02757
15. 24	02744
16. 20	·02815
21. 5	·02953
	·02256
23. 59	·02236

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 30		
9. 0	46·8	48·0
21. 0	45·9	47·5

Greenwich Mean Solar Time.	Western Declination.
Nov. 30	
h m	° ′ ″
19. 5	20. 47. 10
19. 35	49. 40
20. 45	49. 50
21. 1	49. 10
22. 12	54. 30
22. 26	53. 30
22. 40	53. 30
22. 46	54. 10
23. 3	52. 40
23. 41	53. 15
23. 48	54. 15
23. 59	54. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 30	
h m	
7. 43	·1156
8. 9	·1158
9. 1	·1159
9. 8	·1160
9. 19	·1159
10. 28	·1161
10. 55	·1160
11. 9	·1162
11. 22	·1160
11. 32	·1162
11. 53	·1161
12. 1	·1154
12. 8	·1161
12. 28	·1158
12. 51	·1160
13. 21	·1163
13. 44	·1178
14. 0	·1173
14. 16	·1178
14. 40	·1172
14. 52	·1174
15. 2	·1166
15. 8	·1167
15. 17	·1158
15. 30	·1158
15. 54	·1148
16. 15	·1156
16. 44	·1163
17. 15	·1158
18. 0	·1157
18. 27	·1163
18. 34	·1160
18. 40	·1162
19. 0	·1157
19. 7	·1158
19. 21	·1154
19. 30	·1156
19. 41	·1152
19. 59	·1153
20. 45	·1135
20. 58	·1134
21. 5	·1137
21. 22	·1132
21. 42	·1134
21. 52	·1132
21. 59	·1136
22. 8	·1133
22. 23	·1140
22. 29	·1139
22. 39	·1146
23. 4	·1142
23. 19	·1145
23. 26	·1140
23. 39	·1142
23. 47	·1134
23. 59	·1132

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 1		Dec. 1		Dec. 1		Dec. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 54. 25	0. 0	·1132	0. 0	·02236	1. 0	49 ·0	49 ·5
0. 47	55. 45	0. 28	·1130	1. 6	·02220	3. 0	50 ·8	50 ·9
1. 0	55. 0	0. 40	·1133		·02358	9. 0	50 ·9	51 ·5
1. 15	56. 0	1. 38	·1133	1. 57	·02360	21. 0	45 ·0	46 ·8
1. 35	53. 25	2. 4	·1145	2. 5	·02322			
1. 48	55. 50	2. 10	·1116	2. 11	·02357			
1. 56	54. 30	2. 26	·1140	2. 37	·02318			
2. 3	57. 40	2. 50	·1112	3. 0	·02317			
2. 18	47. 0	3. 2	·1115		·02610			
2. 50	54. 50	3. 30	·1136	3. 52	·02595			
3. 24	51. 30	3. 44	·1138		·02658			
4. 2	51. 35	4. 13	·1136	4. 23	·02611			
4. 26	45. 0	4. 38	·1143		·02685			
4. 30	48. 30	4. 52	·1138	6. 35	·02556			
4. 34	48. 0	5. 13	·1141	7. 39	·02544			
4. 46	51. 35	5. 45	·1135	7. 57	·02563			
5. 31	52. 20	6. 19	·1138	8. 25	·02560			
6. 47	49. 30	6. 37	·1135	9. 13	·02577			
7. 7	50. 30	7. 2	·1139	10. 0	·02558			
7. 25	48. 20	7. 30	·1132	13. 42	·02566			
7. 43	38. 50	7. 38	·1120	14. 24	·02600			
8. 5	38. 30	8. 0	·1136	14. 39	·02605			
8. 40	47. 5	8. 11	·1139	19. 7	·02836			
8. 54	45. 30	8. 25	·1129		·02605			
9. 1	47. 30	8. 47	·1126	19. 45	·02544			
9. 20	46. 10	9. 4	·1132	20. 56	·02584			
9. 51	46. 10	9. 14	·1130		·02488			
10. 6	45. 30	9. 39	·1133	23. 29	·02570			
10. 42	47. 5	10. 0	·1131	23. 59	·02568			
10. 52	47. 0	10. 33	·1139					
11. 0	47. 30	10. 45	·1159					
11. 18	47. 10	10. 52	·1141					
11. 33	46. 30	11. 2	·1140					
12. 10	49. 10	11. 13	·1146					
12. 20	48. 50	11. 45	·1154					
12. 45	49. 10	12. 1	·1150					
13. 5	48. 20	12. 9	·1153					
13. 14	48. 0	12. 39:	·1146					
13. 35:	45. 30	13. 0	·1152					
13. 50	46. 30	13. 7	·1152					
14. 15	46. 20	13. 16	·1156					
14. 25	47. 20	13. 26	·1158					
14. 43	44. 30	13. 40	·1151					
15. 1	48. 30	13. 47	·1152					
15. 27	48. 50	13. 59	·1148					
15. 41	49. 45	14. 7	·1153					
17. 17	49. 45	14. 15	·1161					
17. 45	48. 45	14. 29	·1157					
17. 53	49. 30	14. 38	·1160					
		15. 22:	·1155					
			***					
20. 8	49. 45							
20. 33:	50. 30	16. 35	·1156					
21. 3	49. 15	16. 41	·1155					
21. 46	48. 35	16. 56	·1157					
22. 23	50. 55							
22. 28	48. 20	17. 22	·1159					
22. 37	54. 0							
22. 47	52. 20	17. 42	·1164					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 1		Dec. 1		h m		h m	°	°
h m	° ′ ″	h m						
23. 22	20. 53. 0	18. 23	·1163					
23. 31	55. 30	18. 52	·1164					
23. 46	55. 0	19. 37	·1161					
23. 59	55. 30	19. 55	·1161					
		20. 18	·1157					
		20. 38	·1156					
		21. 30	·1146					
			***					
		21. 49	·1145					
			***					
		21. 55	·1147					
			***					
		22. 9	·1144					
		22. 17	·1145					
		22. 25	·1143					
		22. 33	·1146					
			***					
		23. 17	·1141					
		23. 26	·1146					
		23. 39	·1137					
		23. 59	·1142					
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
0. 0	20. 55. 55	0. 0	·1142	0. 0	·02568	1. 0	48 ·4	49 ·0
0. 31	58. 25	0. 9	·1147	1. 39	·02500	3. 0	50 ·5	51 ·0
0. 59	58. 35	0. 30	·1141	3. 47	·02344	9. 0	50 ·5	50 ·9
1. 36	57. 30	1. 0	·1152	4. 4	·02377	21. 0	48 ·5	50 ·0
1. 57	57. 50	1. 24	·1153	5. 39	·02270	22. 0	49 ·0	50 ·1
2. 45	54. 25	2. 23	·1141	6. 28	·02250	23. 0	49 ·9	50 ·5
3. 45:	58. 0	2. 53	·1145	7. 13	·02266			
4. 29	46. 50	3. 23	·1155		·02558			
4. 53	46. 25	3. 54	·1147	9. 37	·02532			
5. 6	50. 30	4. 5	·1131	10. 29	·02490			
5. 30	53. 0	4. 15	·1134	11. 58	·02470			
5. 43	52. 0	4. 27	·1128	16. 45	·02576			
5. 54	53. 0	4. 35	·1138	21. 53	·02641			
6. 5	51. 0	4. 46	·1139		·02752			
6. 16	52. 0	5. 3	·1155	23. 59	·02752			
6. 35	47. 10	5. 14	·1145					
6. 51	48. 0	5. 23	·1143					
7. 3	47. 0	5. 39	·1132					
7. 30	49. 0	6. 15	·1136					
7. 46	48. 15	6. 27	·1130					
8. 13	44. 40	6. 42	·1132					
8. 27	45. 0	7. 4	·1120					
8. 49	44. 0	7. 32	·1122					
9. 5	44. 40	7. 43	·1129					
9. 32	42. 10	8. 7	·1128					
9. 48	43. 15	8. 16	·1132					
9. 58	45. 0	8. 33	·1125					
10. 15	43. 40	8. 54	·1135					
10. 40	45. 30	9. 9	·1130					
10. 55	42. 30	9. 26	·1135					
11. 9	44. 25	9. 32	·1135					
11. 22	44. 30	9. 41	·1140					
11. 59	48. 20	9. 50	·1139					
12. 30	47. 55	10. 16	·1144					
13. 13	51. 0	10. 32	·1142					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 2		Dec. 2						
h m	° ′ ″	h m		h m		h m	°	°
14. 43	20. 52. 0	10. 47	·1154					
15. 15	51. 30	11. 1	·1150					
16. 30	51. 45	11. 33	·1148					
16. 49	52. 0	11. 45	·1153					
18. 45	50. 30	12. 8	·1145					
18. 56	51. 5	12. 18	·1151					
19. 30	50. 50	12. 29	·1149					
19. 38	51. 25	12. 42	·1150					
19. 47	50. 55	12. 50	·1151					
20. 0	51. 50	13. 31	·1152					
20. 24	50. 5	14. 2	·1156					
	***	14. 28	·1155					
21. 24	49. 30	14. 52	·1156					
21. 30	50. 55	15. 7	·1157					
21. 45	50. 30	15. 23	·1157					
	***	16. 45	·1162					
22. 19	51. 40	17. 28	·1163					
	***	18. 8	·1167					
23. 2	51. 0	18. 28	·1166					
	***	19. 39	·1171					
23. 59	52. 0	19. 53	·1177					
		20. 45	·1160					
		20. 51	·1161					
		21. 3	·1156					
		21. 22	·1156					
		21. 27	·1161					
		21. 38	·1157					
		21. 56	·1159					
		22. 1	·1166					
		22. 5	·1159					
		22. 23	·1158					
		22. 37	·1166					
		22. 56	·1163					
		23. 30	·1162					
		23. 49	·1152					
		23. 59	·1159					
Dec. 3		Dec. 3		Dec. 3		Dec. 3		
0. 0	20. 52. 0	0. 0	·1159	0. 0	·02752	0. 0	50 ·9	51 ·2
0. 26	54. 10	0. 32	·1159	0. 7	·02747	1. 0	51 ·2	51 ·3
1. 31	54. 0	0. 37	·1158		·02685	2. 0	51 ·7	51 ·9
2. 39	51. 35	0. 47	·1160	3. 4	·02610	3. 0	52 ·5	52 ·5
3. 3	51. 40	0. 57	·1158	5. 30	·02483	6. 0	52 ·9	53 ·0
3. 15	52. 10	1. 24	·1164	7. 10	·02476	9. 0	52 ·0	52 ·3
3. 33	51. 30	1. 49	·1159	7. 34	·02500	12. 0	51 ·5	52 ·0
5. 45	52. 30	2. 11	·1162	12. 51	·02453	21. 0	50 ·2	51 ·0
6. 20	52. 0	2. 28	·1161	13. 12	·02460	22. 0	50 ·4	51 ·3
6. 43	53. 20	2. 38	·1158	13. 57	·02446	23. 0	50 ·6	51 ·5
7. 15	52. 0	3. 20:	·1164	17. 40	·02477			
7. 42	49. 0	3. 59	·1162	21. 58	·02564			
7. 53	49. 30	4. 30	·1163	22. 51	·02562			
8. 18	49. 0	4. 54	·1159	23. 59	·02580			
8. 37	50. 35	5. 22	·1161					
9. 29	49. 40	5. 52:	·1156					
10. 9	50. 0	6. 15	·1161					
10. 40:	47. 55	6. 23	·1160					
10. 54	49. 0	6. 38	·1151					
11. 15	49. 25	6. 47	·1155					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 3		Dec. 3						
h m	° ′ ″	h m		h m		h m	°	°
12. 30	20. 46. 0	6. 54	·1151					
13. 6	42. 0	7. 7	·1154					
13. 10	45. 0	7. 23	·1139					
13. 25	43. 10	7. 38	·1148					
13. 45	47. 0	7. 47	·1146					
13. 57	46. 0	8. 16	·1149					
14. 10	48. 0	8. 34	·1148					
14. 27	46. 0	8. 52	·1154					
	***	9. 0	·1147					
14. 54	48. 35	9. 5	·1150					
	***	9. 21	·1152					
15. 24	44. 50	9. 39	·1158					
	***	9. 45	·1155					
16. 16	50. 30	10. 0	·1154					
16. 47	50. 30	10. 8	·1161					
17. 5	49. 20	10. 14	·1150					
17. 15	49. 30	10. 20	·1152					
17. 42	48. 0	10. 24	·1148					
18. 32	49. 10	10. 46	·1159					
19. 39	49. 0	10. 52	·1155					
20. 12	51. 0	11. 16	·1151					
20. 48	47. 30	11. 29	·1156					
21. 28	51. 35	12. 3	·1155					
21. 57	48. 45	12. 5	·1147					
22. 15	51. 5	12. 15	·1155					
22. 23	51. 0	12. 24	·1149					
22. 42	53. 35	12. 31	·1155					
23. 17	51. 0	12. 50	·1145					
23. 38	51. 10	13. 8	·1164					
23. 47	50. 30	13. 15	·1164					
23. 59	51. 0	13. 23	·1170					
		13. 30	·1160					
		13. 39	·1160					
		14. 7:	·1148					
		14. 26	·1152					
		14. 31	·1145					
		14. 47	·1156					
		15. 1	·1154					
		15. 6	·1148					
		15. 9	·1154					
		15. 19	·1149					
		15. 29	·1162					
		15. 54:	·1149					
		16. 16	·1157					
		16. 38	·1161					
		16. 57	·1162					
		17. 35	·1159					
		17. 47	·1160					
		17. 56	·1155					
		18. 3	·1161					
		18. 8	·1157					
		18. 38	·1156					
			***					
		19. 37	·1161					
			***					
		19. 51	·1159					
		20. 16	·1143					
		20. 27	·1140					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Dec. 3 h m		h m		h m	°	°
		20. 30	·1131					
		20. 43	·1145					
		20. 57	·1149					
		21. 11	·1149					
		21. 22	·1151					
		21. 32	·1147 ***					
		22. 8	·1149 ***					
		22. 31	·1144 ***					
		22. 52	·1133					
		23. 13	·1135					
		23. 52	·1152					
		23. 59	·1149					
Dec. 4		Dec. 4		Dec. 4		Dec. 4		
0. 0	20. 51. 0	0. 0	·1149	0. 0	·02580	0. 0	51 ·3	52 ·0
0. 18	51. 50	0. 7	·1148	1. 53	·02523	1. 0	52 ·1	52 ·8
0. 40	56. 0 ***	0. 17	·1156	3. 30	·02427	3. 0	54 ·0	54 ·1
		0. 26	·1145		·02536	9. 0	55 ·5	55 ·9
1. 28	52. 55 ***	1. 7	·1150	4. 21	·02533	21. 0	54 ·0	54 ·9
		1. 25	·1149	5. 48	·02552			
1. 57	54. 40	1. 37	·1151	6. 26	·02586			
2. 6	54. 10	1. 52	·1152	6. 39	·02620			
2. 18	55. 0	2. 1	·1156	6. 53	·02592			
2. 25	54. 30	2. 17	·1157	7. 5	·02586			
2. 40	57. 25	2. 37	·1142	7. 11	·02614			
3. 14	51. 50	2. 45	·1147	7. 45	·02597			
3. 22	51. 50	3. 0	·1142	8. 3	·02600			
3. 28	50. 30	3. 14	·1139	8. 24	·02564			
3. 59	39. 0 ***	3. 30	·1146		·02637			
		3. 43	·1118	9. 15	·02622			
5. 2	49. 0	3. 53	·1136	9. 43	·02637			
5. 8	48. 10	4. 11	·1150		·02722			
5. 29	51. 10	4. 20	·1152	14. 13	·02666			
5. 39	50. 0	4. 30	·1156	14. 32	·02643			
5. 43	51. 0	4. 51	·1152	18. 15	·02755			
5. 50	49. 45	5. 1	·1154	21. 45	·02776			
6. 3	50. 0	5. 14	·1144	23. 27	·02837			
6. 32	39. 0	5. 28	·1149	23. 59	·02818			
6. 45	44. 30	5. 52	·1134					
7. 0	43. 45	5. 59	·1142					
7. 12	44. 10	6. 20	·1142					
7. 23	43. 10	6. 26	·1134					
7. 44	47. 0	6. 36	·1135					
7. 57	47. 25	6. 52	·1193					
8. 13	50. 35	7. 2	·1168					
8. 25	48. 30	7. 10	·1157					
8. 35	49. 0	7. 14	·1152					
8. 52	46. 30	7. 25	·1144					
9. 8	50. 20	7. 45	·1148					
9. 23	47. 40	8. 0	·1138					
9. 38	49. 0	8. 7	·1150					
10. 0	47. 30	8. 15	·1151					
10. 37	47. 25	8. 24	·1142					
10. 47	48. 10	8. 31	·1147					
11. 0	48. 0	8. 59	·1144					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 4 h m	° ′ ″	Dec. 4 h m		h m		h m	°	°
11. 14	20. 48. 25	9. 7	·1155					
11. 31	47. 0	9. 22	·1146					
11. 38	48. 0	9. 32	·1150					
12. 0:	46. 0	10. 0:	·1146					
12. 23	48. 0	10. 22	·1150					
12. 42	47. 25	10. 38	·1148					
13. 50	50. 0	10. 47	·1151					
14. 5	53. 40	10. 57	·1146					
14. 31	49. 10	11. 10	·1151					
14. 50	50. 30 ***	11. 17	·1149					
		11. 31	·1151					
15. 24	50. 30	11. 46	·1148					
15. 55	52. 10	12. 7	·1148					
16. 12	50. 10	12. 15	·1152					
16. 27	51. 10	12. 28	·1146					
16. 41	50. 0	12. 40	·1140					
16. 46	50. 55	12. 53	·1146					
17. 0	49. 10	13. 8	·1144					
17. 16	50. 0 ***	13. 30	·1149					
		13. 38	·1145					
19. 41	48. 30 ***	14. 0	·1158					
		14. 9	·1160					
20. 8	49. 55 ***	14. 24	·1150					
		14. 41	·1149					
21. 0	47. 50 ***	14. 49	·1146					
		15. 29	·1147					
21. 38	51. 30	15. 36	·1144					
21. 53	50. 55	15. 45	·1150					
22. 15	52. 35	16. 1	·1147					
22. 26	51. 0	16. 11	·1151					
22. 45	53. 30	16. 22	·1152					
23. 3	55. 25	16. 34	·1149					
23. 21	51. 45	16. 44	·1153					
23. 32	53. 10	16. 52	·1151					
23. 59	53. 10	17. 5	·1156					
		17. 32	·1152					
		17. 51	·1154					
		18. 47	·1154					
		19. 0	·1157					
		19. 9	·1155					
		19. 37	·1156					
		19. 45	·1153					
		19. 59	·1152					
		20. 7	·1157					
		20. 26	·1147					
		20. 36	·1148					
		20. 45	·1144					
		20. 52	·1148					
		21. 0	·1143					
		21. 16	·1139					
		21. 27	·1136					
		21. 36	·1125					
		22. 0	·1115					
		22. 17	·1121					
		22. 28	·1115					
		22. 33	·1124					
		22. 43	·1135					
		22. 44	·1120					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Dec. 5	
0. 0	20. 53. 5
0. 32	57. 0
0. 58	56. 0
1. 28	53. 10
1. 36	53. 45
2. 14	51. 50
2. 40	52. 35
3. 17	52. 0
3. 41	53. 30
3. 57	53. 0
4. 8	51. 20
4. 30	51. 55
4. 58	43. 0
5. 6	44. 0
5. 12	36. 0
5. 30	50. 10
5. 40	48. 0
5. 48	48. 30
6. 11	38. 0
6. 23	47. 0
6. 32	46. 0
6. 50	46. 50
6. 58	45. 0
7. 23	45. 0
7. 48	44. 30
8. 30	47. 30
8. 44	35. 30
9. 6	49. 0
9. 28	44. 55
9. 47	53. 50
10. 11	45. 30
10. 20	46. 55
10. 51	46. 50
11. 7	43. 25
11. 37	49. 45
12. 0	48. 0
12. 23	47. 50
12. 37	44. 25
13. 17	49. 0
13. 30	48. 0
13. 45	53. 45
14. 12	51. 50
15. 6	51. 30
15. 22	52. 10
15. 44	50. 40
16. 18	51. 25
16. 32	50. 30
16. 45	52. 30
16. 54	52. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec 4 h m	
22. 53	·1131
22. 59	·1123
23. 19	·1128
23. 31	·1148
23. 38	·1140
23. 43	·1147 (†)
Dec. 5	
0. 0	·1143
0. 31	·1146
0. 53	·1140
1. 14	·1139
1. 28	·1144
1. 31	·1139
1. 38	·1146
1. 59:	·1140
2. 28	·1150
3. 2	·1148
3. 17	·1154
3. 35	·1147
3. 55	·1148
4. 7	·1145
4. 16	·1150
4. 26	·1143
4. 46	·1135
4. 54	·1125
5. 7	·1149
5. 15	·1143
5. 28	·1178
5. 38	·1168
5. 46	·1144
5. 51	·1146
6. 1	·1108
6. 22	·1141
6. 32	·1128
6. 47	·1137
6. 58	·1134
7. 11	·1140
7. 22	·1135
7. 38	·1131
7. 47	·1135
7. 53	·1134
7. 59	·1135
8. 11	·1131
8. 23	·1134
8. 35	·1129
8. 50	·1177
9. 1	·1155
9. 17	·1137
9. 34	·1151
9. 50	·1131
10. 3	·1142
10. 13	·1143
10. 23	·1136
10. 41	·1142
10. 50	·1140
11. 16	·1166

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Dec. 5	
0. 0	·02818
2. 18	·02792
4. 6	·02688
4. 50	·02668
5. 1	·02677
5. 15	·02666
	·02722
6. 3	·02678
6. 23	·02720
6. 37	·02712
8. 41	·02716
8. 49	·02737
9. 9	·02696
9. 37	·02710
9. 55	·02688
11. 11	·02735
11. 33	·02720
13. 45	·02736
14. 13	·02725
16. 14	·02744
17. 29	·02798
19. 11	·02800
23. 32	·02802
23. 59	·02784

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 5		
1. 0	56 ·1	55 ·9
3. 0	57 ·7	56 ·9
9. 0	57 ·0	56 ·6
21. 0	56 ·4	56 ·8

Greenwich Mean Solar Time.	Western Declination.
Dec. 5 h m	° ′ ″
16. 57	20. 53. 10
17. 22	51. 0
17. 41	52. 0
18. 38	50. 35
18. 53	51. 0
19. 15	50. 15
19. 28	51. 0
20. 15	49. 40
21. 22	48. 10
21. 49	52. 15
22. 30	49. 0
23. 2	49. 25
23. 33	52. 40
23. 55	51. 0
23. 59	51. 10
Dec. 6	
0. 0	20. 51. 20
0. 30	52. 15
0. 42	51. 0
1. 0	51. 30
	***
2. 11	51. 30
	***
2. 25	52. 30
	***
3. 10	51. 0
3. 54	51. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 5 h m	
11. 34	·1153
11. 45	·1154
12. 11	·1146
12. 20	·1147
12. 45	·1142
13. 19	·1145
13. 34	·1141
13. 43	·1144
13. 54	·1137
14. 15	·1150
14. 39	·1145
14. 52	·1150
15. 0	·1148
15. 8	·1153
15. 17	·1151
15. 38	·1157
16. 4	·1153
16. 15	·1144
16. 35	·1146
16. 47	·1142
16. 56	·1147
17. 8	·1145
17. 24	·1148
17. 31	·1152
18. 1	·1151
18. 11	·1154
19. 7	·1153
19. 19	·1156
19. 26	·1149
19. 38	·1156
19. 53	·1150
20. 17	·1149
20. 37	·1144
20. 48	·1147
21. 0	·1143
21. 17	·1145
21. 45	·1144
22. 5	·1141
22. 22	·1144
22. 41	·1136
22. 48	·1142
23. 5	·1141
23. 30	·1133
23. 47	·1131
23. 59	·1140
Dec. 6	
0. 0	·1140
0. 6	·1142
0. 39	·1141
1. 43	·1142
2. 3	·1140
	***
2. 50:	·1138
	***
3. 39	·1145
4. 7	·1119
4. 37	·1144

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Dec. 6	
0. 0	·02784
1. 56	·02820
3. 32	·02823
3. 57	·02805
4. 30	·02820
5. 8	·02797
7. 32	·02758
7. 45	·02782
8. 36	·02743
10. 40	·02740
11. 44	·02684

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 6		
1. 0	58 ·2	57 ·6
3. 0	59 ·0	58 ·0
9. 0	58 ·5	57 ·5
21. 50	57 ·7	58 ·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 6		Dec. 6		Dec. 6				
h m	° ′ ″	h m		h m		h m	°	°
4. 22	20. 38. 30	4. 43	·1141	12. 50	·02687			
4. 44	45. 0	4. 56	·1145	13. 2	·02680			
5. 8	49. 0	5. 14	·1140	16. 17	·02673			
5. 20	48. 30	5. 39:	·1144		·02720			
5. 30	49. 0	6. 4	·1142	18. 45	·02696			
5. 44	48. 30	6. 16	·1145	19. 22	·02712			
6. 0	51. 0	6. 45	·1147	22. 7	·02698			
6. 24	51. 20	7. 2:	·1139	23. 0	·02703			
6. 42	50. 30	7. 15	·1140		·02882			
7. 15	52. 0	7. 39	·1119	23. 59	·02925			
7. 30	47. 20	7. 59	·1172					
7. 52	25. 0	8. 21	·1163					
8. 3	35. 0	8. 35	·1154					
8. 31	41. 0	8. 55	·1146					
8. 43	38. 0	9. 11	·1128					
9. 30	47. 30	9. 30	·1141					
10. 15	49. 10	9. 49	·1135					
10. 45	43. 30	10. 14	·1140					
10. 55	45. 0	10. 30	·1136					
11. 1	44. 0	11. 11	·1166					
11. 38	53. 20	11. 34	·1163					
12. 26	43. 5	12. 2	·1137					
13. 0	49. 30	12. 36	·1143					
14. 0	47. 30	12. 46	·1140					
14. 45	49. 35	13. 4	·1143					
15. 14	50. 0	13. 28	·1138					
15. 28	49. 20	13. 59	·1144					
16. 7	51. 30	14. 17	·1141					
16. 32	49. 20	16. 29	·1145					
16. 56	51. 10	17. 1	·1146					
17. 5	50. 10	17. 42	·1142					
	***	17. 52	·1146					
17. 33	51. 30	18. 2	·1144					
18. 0	49. 50	18. 27	·1150					
18. 12	50. 10	18. 58	·1142					
18. 43	49. 25	19. 3	·1144					
	***	19. 22	·1133					
20. 37	49. 35	19. 45	·1147					
21. 7	48. 35		***					
	***	22. 4	·1145					
21. 24	49. 55		***					
21. 35	49. 10	23. 1	·1141					
21. 55	51. 40	23. 21	·1140					
22. 6	51. 30	23. 59	·1125					
22. 30	54. 0							
22. 45	52. 40							
23. 0	52. 25							
23. 15	53. 35							
23. 25	53. 0							
23. 35	54. 30							
23. 59	53. 10							
Dec. 7		Dec. 7		Dec. 7		Dec. 7		
0. 0	20. 53. 0	0. 0	·1125	0. 0	·02925	8. 52	58·2	58·8
	***	0. 22	·1117	0. 39	·02944	21. 0	52·9	55·5
0. 35	52. 0	1. 4	·1144	3. 24	·02907			
1. 22	54. 30	1. 22	·1142	4. 24	·02863			
1. 52	53. 50	2. 16	·1144	6. 14	·02848			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 7		Dec. 7		Dec. 7				
h m	° ′ ″	h m		h m		h m	°	°
2. 22	20. 54. 55	2. 30	·1133	6. 47	·02876			
2. 44	51. 0	3. 2	·1146	7. 26	·02852			
	***	3. 13	·1136	8. 10	·02857			
3. 3	52. 0	3. 16	·1141	8. 22	·02872			
3. 28	50. 0	3. 25	·1132	11. 28	·02870			
3. 47	51. 35	3. 43	·1144	13. 40	·02908			
4. 3	50. 55	3. 59	·1137	15. 26	·02890			
4. 40	52. 20	4. 17	·1146	16. 20	·02848			
5. 0	51. 35	4. 24	·1142	18. 50	·02917			
5. 30	51. 40	5. 11	·1144	23. 59	·03154			
6. 2	50. 0	5. 19	·1149					
6. 45	40. 55	5. 30	·1144					
7. 8	48. 40	5. 36	·1148					
7. 27	47. 50	5. 45	·1144					
7. 51	49. 0	6. 15	·1147					
8. 5	48. 5	6. 32	·1150					
8. 27	50. 0	6. 54	·1170					
	***	7. 10	·1158					
10. 15	50. 0	7. 20	·1158					
10. 25	50. 35	7. 36	·1154					
10. 38	48. 50	8. 7	·1136					
11. 7	51. 50	8. 30	·1145					
11. 37	48. 30	8. 41	·1144					
12. 13	51. 0	9. 15	·1146					
13. 41	50. 10	9. 30	·1143					
14. 2	52. 0	9. 47	·1145					
14. 20	52. 0	9. 54	·1143					
14. 45	55. 30	10. 9	·1146					
15. 0	20. 55. 25	10. 22	·1146					
15. 27	21. 0. 0	10. 30	·1148					
16. 0	20. 55. 35	10. 38	·1156					
16. 28	50. 25	10. 55	·1156					
16. 41	50. 25	11. 22	·1142					
17. 2	51. 40	11. 49	·1148					
18. 0	51. 20	12. 7	·1142					
18. 12	52. 30	12. 28	·1144					
18. 38	51. 20	13. 58	·1146					
19. 53	52. 40	14. 43	·1136					
20. 39	51. 50	15. 7	·1154					
20. 57	52. 10	15. 22	·1150					
21. 17	52. 0	15. 27	·1153					
21. 48	50. 30	15. 41	·1155					
22. 57	55. 40	15. 53	·1150					
23. 33	54. 15	16. 7	·1153					
23. 48	54. 55	16. 12	·1150					
23. 59	54. 15	16. 23	·1150					
		16. 25	·1148					
			***					
		17. 13	·1147					
		17. 42	·1148					
		17. 53	·1153					
		18. 0	·1150					
		18. 37	·1150					
		19. 2	·1154					
		19. 58	·1146					
		20. 15	·1148					
			***					
		20. 35	·1143					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Dec. 7 h m		h m		h m	°	°
		20. 59	·1140					
		21. 30	·1139					
			***					
		22. 53	·1150					
		23. 16	·1147					
			(†)					
Dec. 8		Dec. 8		Dec. 8		Dec. 8		
0. 0	20. 54. 55		(†)	0. 0	·03154	1. 0	53 ·0	54 ·0
0. 13	57. 10	1. 0	·1153*	0. 24	·03138	3. 0	54 ·0	55 ·5
0. 42	53. 0	1. 5	·1148	2. 8	·03018	9. 0	53 ·0	54 ·8
1. 27	53. 40	1. 23	·1154	5. 0	·03060	21. 0	48 ·5	51 ·0
1. 41	54. 35	1. 55	·1151	6. 17	·03033			
1. 58	54. 45	2. 7	·1153	6. 40	·03036			
2. 5	55. 20	2. 29	·1145	7. 16	·03010			
4. 42	52. 30	2. 57	·1149	7. 43	·03007			
5. 3	53. 20	3. 30	·1148		·03092			
5. 16	52. 50	3. 55	·1150	9. 27	·03084			
	***	4. 38	·1146	10. 24	·03093			
6. 4	55. 30	5. 16	·1148	13. 10	·03204			
	***	5. 34	·1152	17. 6	·03300			
6. 27	47. 0	6. 20	·1140	20. 7	·03412			
6. 48	53. 10	6. 43	·1161		·03070			
	***	7. 0	·1149	22. 38	·03177			
8. 15	53. 25	7. 27	·1147	23. 59	·03163			
8. 30	53. 50	7. 44	·1148					
9. 13	43. 40	8. 16	·1144					
9. 33	43. 15	8. 37	·1145					
10. 2	52. 50	8. 59	·1150					
10. 17	50. 30	9. 15	·1164					
10. 27	50. 55	9. 23	·1164					
10. 34	50. 25	9. 32	·1156					
10. 58	52. 0	9. 48	·1160					
11. 12	51. 30	10. 2	·1146					
12. 0	55. 10	10. 22	·1144					
12. 30	53. 0	10. 30	·1138					
12. 45	53. 0	11. 0	·1137					
	(†)	11. 15	·1142					
14. 22	49. 0	11. 28	·1142					
14. 33	49. 0		***					
14. 45	47. 55	11. 59	·1148					
	***		***					
15. 33	51. 35	12. 38:	·1145					
15. 52	51. 50		***					
16. 18	52. 35	13. 17	·1150					
16. 48	51. 25	14. 3	·1154					
	***	14. 22	·1148					
20. 3	52. 10	14. 34	·1151					
	***	14. 53	·1150					
21. 18	51. 0	15. 1	·1154					
	***	15. 55	·1150					
23. 59	53. 40	16. 8	·1153					
		16. 17	·1150					
		16. 24	·1154					
		16. 34	·1156					
		16. 47	·1154					
		17. 0	·1155					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Dec. 8 h m		h m		h m	°	°
		17. 27	·1152					
		17. 44	·1154					
		17. 55	·1152					
		18. 5	·1154					
		20. 5	·1156					
		21. 23	·1148					
		22. 53	·1146					
		23. 59	·1148					
Dec. 9		Dec. 9		Dec. 9		Dec. 9		
0. 0	20. 53. 50	0. 0	·1148	0. 0	·03163	1. 0	51 ·5	52 ·5
0. 15	53. 55	0. 14	·1147	3. 1	·03040	3. 0	52 ·5	53 ·8
	***	0. 38	·1146	6. 10	·02872	9. 0	52 ·5	53 ·0
0. 40	55. 0	1. 22	·1147	7. 27	·02860	21. 0	53 ·5	55 ·3
	***	1. 32	·1144	8. 42	·02883	22. 0	54 ·0	55 ·9
1. 32	54. 35	1. 39	·1147	10. 33	·02950	23. 0	55 ·0	56 ·5
2. 31	53. 30	1. 56	·1142	11. 3	·02953			
3. 23	55. 50	2. 13	·1148	14. 20	·03037			
3. 49	54. 0	2. 42	·1151	18. 29	·03058			
4. 0	51. 40	3. 13	·1152	23. 14	·02900			
4. 23	49. 30	3. 58:	·1148	23. 59	·02772			
5. 33	53. 10	4. 45	·1156					
6. 20	52. 0	5. 56	·1153					
7. 8	52. 10	7. 45	·1154					
8. 35	49. 30	8. 14	·1149					
8. 48	50. 10	8. 29	·1152					
9. 28	46. 0	8. 45	·1148					
9. 42	46. 55	9. 13:	·1156					
10. 7	45. 0	9. 33	·1150					
10. 33	47. 20	9. 43	·1151					
11. 0	50. 30	10. 2:	·1143					
11. 29	48. 30	10. 29:	·1158					
11. 39	49. 10	10. 48	·1149					
11. 54	48. 50	11. 11	·1155					
12. 14	50. 0	11. 20	·1151					
12. 40	48. 25	11. 35	·1156					
13. 8	51. 10	12. 8	·1146					
13. 40	50. 50	13. 7	·1151					
14. 9	53. 0	13. 19	·1148					
14. 35	51. 40	13. 36	·1152					
14. 48	52. 0	14. 7	·1154					
15. 5	50. 10	14. 31	·1153					
15. 18	51. 15	14. 42	·1158					
18. 11	49. 50	15. 2	·1154					
22. 2	50. 30	15. 58	·1154					
22. 37	52. 0	16. 20	·1157					
23. 8	55. 0	16. 25	·1156					
23. 55	57. 35	18. 7	·1156					
23. 59	57. 45	18. 23	·1153					
		19. 15	·1152					
		20. 1	·1146					
		20. 15	·1147					
		20. 35	·1143					
		20. 45	·1143					
		21. 8	·1145					
		21. 59	·1142					
		22. 45	·1142					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Dec. 9 h m		h m		h m	°	°
		23. 28	·1153					
		23. 59	·1155					
Dec. 10		Dec. 10		Dec. 10		Dec. 10		
0. 0	20. 57. 35	0. 0	·1155	0. 0	·02772	0. 0	56 ·0	57 ·0
3. 15	52. 20	0. 18	·1150	0. 15	·02776	1. 0	56 ·9	58 ·0
4. 55	52. 10	0. 52	·1148	1. 34	·02678	2. 0	58 ·0	58 ·5
5. 3	52. 40	1. 25	·1153	2. 0	·02663	3. 0	58 ·9	59 ·9
6. 33	52. 50	2. 22	·1149		·02860	6. 0	58 ·0	59 ·2
6. 42	51. 45	3. 17	·1147	3. 0	·02834	9. 0	55 ·8	57 ·0
7. 3	52. 0	4. 14	·1146		·03066	12. 0	53 ·0	54 ·9
7. 19	50. 20	4. 47	·1144	4. 29	·02948	19. 0	48 ·1	50 ·2
8. 25	51. 0	5. 31	·1144		·03064	21. 0	47 ·0	48 ·5
8. 33	52. 0	5. 43	·1149	5. 27	·03036	22. 0	47 ·0	48 ·5
9. 10	51. 0	6. 43	·1147		·03103	23. 0	47 ·0	48 ·5
9. 25	53. 5	7. 8	·1148	5. 53	·03075			
9. 45	51. 45	7. 24	·1151	5. 56	·03130			
9. 58	52. 50	7. 41	·1150	6. 32	·03102			
10. 52	51. 25	7. 59	·1146	6. 36	·03153			
11. 45	53. 0	8. 43	·1143	7. 35	·03141			
12. 19	49. 15	9. 0	·1144	7. 39	·03200			
13. 43	53. 0	9. 20	·1142	8. 8	·03192			
14. 30	51. 40	9. 30	·1138	8. 11	·03225			
16. 18	53. 50	9. 45	·1144	9. 14	·03276			
16. 53	52. 20	10. 7	·1139	12. 32	·03513			
	***	10. 29	·1143	16. 0	·03447			
17. 46	53. 0	10. 43	·1142	19. 56	·03236			
20. 0	52. 0	10. 51	·1146	22. 28	·03037			
22. 15	51. 25	11. 30	·1144		(†)			
22. 32	52. 10	11. 42	·1148	23. 16	·02782			
	(†)	11. 56	·1146	23. 59	·02770			
23. 30	54. 10	12. 24	·1147					
23. 59	53. 40	12. 37	·1150					
		13. 59	·1150					
		14. 5	·1151					
		15. 20	·1151					
		16. 34	·1153					
		17. 10	·1159					
		18. 30	·1158					
		18. 50	·1162					
		19. 15	·1158					
		19. 31	·1160					
		20. 5	·1158					
		20. 23:	·1162					
		20. 42	·1158					
		20. 52	·1161					
		21. 30	·1158					
		21. 42	·1159					
		21. 55	·1157					
		22. 35	·1157					
			(†)					
Dec. 11		Dec. 11		Dec. 11		Dec. 11		
0. 0	20. 53. 50		(†)	0. 0	·02770	0. 0	47 ·8	49 ·9
0. 55	54. 0	0. 28	·1156	1. 57	·02752	1. 0	49 ·5	51 ·0
2. 12	51. 5	1. 10:	·1153		·02643	3. 0	52 ·0	53 ·4
4. 31	52. 30	1. 46	·1160	4. 30	·02462	9. 0	54 ·0	55 ·9
5. 31	51. 10	2. 32	·1156	7. 3	·02258	21. 0	46 ·3	50 ·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 11		Dec. 11		Dec. 11		Dec. 11		
h m	° ′ ″	h m		h m		h m	°	°
6. 1	20. 52. 15	3. 15	·1160	8. 5	·02193			
8. 14	51. 25	3. 50	·1159	12. 22	·02074			
8. 27	51. 50	4. 17	·1161	15. 44	·02146			
	(†)	4. 39	·1160	22. 21	·02458			
9. 0	51. 20*	5. 32	·1162	23. 39	·02542			
21. 0	51. 28*	6. 1	·1156	23. 59	·02540			
		7. 20	·1157					
		7. 41	·1152					
		8. 10	·1156					
		8. 34	·1153					
		8. 45	·1154					
		9. 16	·1149					
		9. 45	·1153					
		10. 3	·1149					
		10. 11	·1150					
		10. 22	·1147					
		10. 58	·1152					
		14. 8	·1157					
		14. 39	·1154					
		15. 7	·1154					
		15. 43	·1149					
		16. 31	·1157					
		16. 47	·1158					
		17. 16	·1161					
		19. 0	·1161					
		20. 44	·1165					
		21. 13	·1163					
		21. 44	·1166					
		22. 0	·1164					
		22. 11	·1168					
		22. 41	·1164					
		23. 11	·1165					
		23. 28	·1158					
		23. 43	·1160					
		23. 59	·1162					
Dec. 12		Dec. 12		Dec. 12		Dec. 12		
	(†)	0. 0	·1162	0. 0	·02540	1. 0	48 ·3	50 ·9
1. 0	20. 54. 55	0. 18	·1162	1. 56	·02434	3. 0	50 ·0	52 ·0
2. 12	55. 10	1. 1	·1164	5. 17	·02266	9. 0	49 ·5	51 ·5
2. 27	54. 0	1. 53	·1163	6. 3	·02257	21. 0	47 ·0	48 ·5
3. 46	53. 55	2. 15	·1167	7. 2	·02225			
4. 16	56. 0	2. 31	·1167	9. 30	·02222			
4. 35	54. 40	2. 38	·1163	16. 17	·02542			
5. 15	55. 30	2. 47	·1165	21. 49	·02711			
5. 40	51. 40	2. 53	·1164	22. 44	·02705			
6. 21	54. 55	3. 29	·1166	23. 59	·02748			
6. 58	55. 30	3. 39	·1164					
7. 6	54. 30	3. 56	·1170					
8. 42	53. 25	4. 15	·1166					
9. 45	49. 0	4. 20	·1166					
9. 58	51. 0	4. 32	·1162					
10. 7	50. 50	4. 56:	·1164					
10. 39	51. 50	5. 40	·1143					
11. 3	51. 15	5. 57	·1144					
11. 31	51. 45	6. 26	·1152					
12. 3	50. 50	6. 32	·1150					
13. 30	53. 0	6. 56	·1153					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Dec. 12 h m	° ′ ″
17. 19	20. 51. 0
17. 55	52. 0
18. 37	50. 55
19. 56	52. 0
21. 58	50. 5
	(†)
Dec. 13	
	(†)
0. 45	20. 52. 20
1. 0	52. 0
1. 27	52. 30
2. 8	51. 5
3. 0	51. 25
3. 38	52. 50
4. 33	51. 30
5. 33	51. 35
6. 4	50. 40
9. 18	49. 10
11. 30	49. 5
14. 30	49. 10
14. 50:	47. 5
15. 24	51. 0
15. 58:	45. 20
17. 2	49. 10
17. 15	48. 30
18. 13	51. 0
20. 57	50. 45
21. 18	49. 25
22. 27	53. 40
	(†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 12 h m	
7. 20	·1158
7. 44	·1152
8. 3	·1157
8. 22	·1156
8. 31	·1158
9. 1	·1158
9. 20	·1160
9. 34	·1157
9. 53	·1160
10. 7	·1156
10. 18	·1159
10. 37	·1157
11. 20	·1156
11. 35	·1159
12. 2	·1158
13. 18	·1163
14. 48	·1164
15. 31	·1166
17. 19	·1166
17. 39	·1167
17. 59	·1167
18. 15	·1169
18. 28	·1167
18. 32	·1169
19. 21	·1165
20. 8	·1168
20. 16	·1166
20. 37	·1168
21. 22	·1162
21. 43	·1162
21. 55	·1158
	(†)
Dec. 13	
	(†)
1. 0	·1163
1. 30	·1162
2. 10	·1162
3. 6:	·1161
3. 46	·1154
4. 20	·1157
6. 16	·1157
7. 3	·1162
7. 45	·1156
8. 17	·1163
8. 45	·1157
12. 0	·1157
12. 14	·1159
13. 9	·1158
13. 24	·1162
13. 55:	·1158
14. 24	·1161
14. 35	·1160
15. 8	·1172
15. 36:	·1152
16. 20:	·1162
19. 16	·1173
19. 58	·1181

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Dec. 13	
0. 0	·02748
2. 35	·02638
	·02503
8. 40:	·02142
14. 51	·02193
15. 26	·02184
23. 59	·02610

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 13		
1. 0	49 ·0	50 ·0
3. 0	50 ·5	51 ·7
9. 0	51 ·0	53 ·2
21. 30	45 ·0	48 ·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Dec. 14	
9. 12	20. 23. 55*
21. 0	49. 43
Dec. 15	
1. 0	20. 50. 44*
3. 0	46. 46*
9. 0	47. 24*
21. 0	47. 52*

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 13 h m	
20. 51	·1181
21. 45	·1184
22. 13	·1180
22. 31	·1184
	(†)
Dec. 14	
9. 0	·1193*
21. 0	·1138
Dec. 15	
1. 0	·1134*
3. 0	·1142*
9. 0	·1144*
21. 0	·1146

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Dec. 14	
0. 0	·02610
1. 32	·02663
3. 19	·02620
3. 42	·02592
4. 34	·02596
4. 51	·02658
5. 12	·02762
5. 43	·02844
5. 54	·02842
6. 24	·02972
6. 38	·02950
6. 44	·02923
6. 52	·02936
7. 0	·02842
7. 10	·02840
7. 17	·02868
7. 32	·02876
7. 45	·02897
8. 20	·02812
8. 32	·02816
8. 39	·02762
9. 1	·02810
9. 30	·02650
10. 0	·02622
10. 33	·02424
10. 55	·02340
11. 31	·02320
12. 25	·02456
12. 54	·02450
13. 23	·02526
14. 22	·02382
14. 36	·02448
15. 33	·02506
16. 9	·02610
16. 30	·02600
17. 22	·02666
18. 33	·02720
18. 53	·02716
21. 7	·02770
21. 37	·02750
23. 59	·02745
Dec. 15	
0. 0	·02745
3. 54	·02654
5. 11	·02552
7. 19	·02437
10. 9:	·02338
14. 7	·02360
20. 25	·02516
22. 26	·02582

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 14		
9. 0	48 ·5	50 ·3
21. 0	44 ·8	47 ·0
Dec. 15		
1. 0	47 ·0	48 ·7
3. 0	48 ·7	49 ·8
9. 0	49 ·5	51 ·0
21. 0	46 ·0	47 ·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

December 14. The Photographic Traces of the Declination and Horizontal Force Magnets were lost on this day.

December 15. Owing to some inadvertence, the time-piece was not in connexion with the cylinder upon which the movements of the Declination and Horizontal Force Magnets are registered.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	h m		Dec. 15 h m		h m	°	°
				23. 11	·02594 (†)			
Dec. 16		Dec. 16		Dec. 16		Dec. 16		
0. 0	20. 46. 0	0. 0	·1136	1. 0	·02541*	1. 0	48·2	50·3
0. 9	46. 0	0. 21	·1138	3. 0	·02319*	3. 0	50·2	51·7
0. 38	47. 15	0. 44	·1135	9. 0	·02209*	9. 0	51·3	51·7
1. 47	45. 0	0. 54	·1137	21. 0	·02240*	21. 0	52·1	52·6
2. 30	44. 55	1. 22	·1134			22. 0	52·5	53·0
2. 45	44. 10	1. 58	·1140			23. 0	53·4	53·9
	(†)	2. 8	·1138					
4. 0	44. 10	2. 42	·1143					
4. 37	42. 30	3. 30	·1141					
5. 46	46. 15	3. 49	·1145					
7. 5	44. 40	4. 17	·1140					
11. 36	44. 35	4. 30	·1141					
	(†)	4. 43	·1148					
12. 27	45. 0	6. 16	·1148					
13. 44	45. 25	7. 12	·1149					
14. 13	44. 30	7. 29	·1147					
	***	8. 20	·1146					
16. 55	43. 50	8. 48	·1148					
	***	9. 6	·1148					
19. 4	47. 0	10. 52	·1146					
20. 53	44. 40	11. 0	·1143					
21. 10	44. 0	11. 11	·1143					
	(†)	11. 22	·1146					
		12. 0	·1146					
		12. 22	·1144					
		13. 24	·1146					
		13. 37	·1151					
		14. 14	·1146					
		14. 46	·1150					
		14. 53	·1147					
		15. 43	·1146					
		16. 38	·1147					
		16. 48	·1150					
		17. 2	·1148					
		17. 38	·1148					
		18. 7	·1146					
		18. 43	·1150					
		19. 19	·1145					
		19. 38	·1144					
		19. 53	·1146					
		20. 54	·1142					
			(†)					
		22. 40	·1137					
		23. 30	·1130					
		23. 59	·1136					
Dec. 17		Dec. 17		Dec. 17		Dec. 17		
	(†)	0. 0	·1136		(†)	0. 0	54·5	55·8
0. 14	20. 46. 40	1. 10	·1135	1. 0	·02126*	1. 0	55·0	56·0
0. 48	47. 40	1. 52	·1141	1. 51	·02315	2. 0	55·9	56·3
1. 22:	46. 40	2. 4	·1137	2. 52	{·02292	3. 0	56·5	57·0
2. 1	48. 15	2. 20	·1140		{·02838	6. 0	56·7	57·0
	***	2. 39	·1132	5. 0	·02635	9. 0	55·3	57·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 17 h m	° ′ ″	Dec. 17 h m		Dec. 17 h m		Dec. 17 h m	°	°
3. 8:	20. 44. 10	3. 0	·1137	6. 57	·02716	12. 0	52·5	55·0
	***	3. 17	·1147	9. 52	·02745	18. 0	48·0	49·7
3. 48	46. 10	3. 52	·1146	11. 22	·02743	21. 0	47·3	48·9
	***	4. 6	·1142	13. 23	·02826	22. 0	47·8	49·0
4. 22	45. 40	4. 30	·1142	15. 47	·02975	23. 0	48·4	49·7
4. 59	46. 20	4. 38	·1138	19. 0	·03283			
5. 8	45. 20	5. 1	·1148	21. 1	{·03116			
	***	5. 15	·1144		{·03040			
6. 23	46. 0	5. 50	·1144	23. 59	·02963			
6. 46	39. 30	6. 12	·1138					
7. 30	45. 10	6. 21	·1138					
8. 12	46. 10	6. 35	·1132					
8. 32	45. 30	6. 57	·1154					
8. 44	46. 0	7. 4	·1152					
10. 1	44. 25	7. 15	·1156					
10. 15	46. 0	7. 37	·1144					
11. 12	47. 0	7. 55	·1142					
11. 33:	45. 50	8. 7	·1143					
12. 0	48. 0	8. 15	·1140					
12. 34	46. 40	8. 46	·1143					
12. 57	48. 40	9. 15	·1136					
13. 18	47. 0	9. 29	·1139					
13. 42	48. 20	9. 41	·1139					
14. 17	46. 45	10. 7	·1152					
	***	10. 30	·1145					
15. 5	49. 20	10. 54	·1151					
	***	11. 22	·1143					
16. 37	40. 45	11. 40	·1143					
18. 25	47. 30	11. 59	·1146					
	***	12. 8	·1142					
20. 5	43. 55	12. 37	·1145					
	**	12. 47	·1151					
22. 26	43. 50	13. 15	·1146					
22. 40	45. 40	13. 28	·1148					
23. 7	44. 55	13. 43	·1147					
23. 59	47. 10	14. 1	·1149					
		14. 13	·1146					
		14. 38	·1145					
		15. 13	·1150					
		15. 40	·1153					
		16. 16	·1159					
		17. 0	·1158					
		17. 13	·1160					
		18. 0	·1155					
		18. 20	·1157					
		19. 0	·1155					
		19. 51	·1156					
		21. 22	·1154					
		22. 45	·1152					
		23. 38:	·1146					
		23. 59	·1147					
Dec. 18		Dec. 18		Dec. 18		Dec. 18		
0. 0	20. 47. 0	0. 0	·1147	0. 0	·02963	0. 0	49·1	50·5
0. 32	48. 35	0. 30	·1152	0. 15	{·02960	1. 0	50·0	50·7
0. 56	49. 10		(†)		{·02894	3. 0	51·0	51·0
1. 24	48. 45	1. 0	·1146*	2. 51	·02848	9. 3	53·7	53·5
1. 45	49. 50	1. 59	·1146		(†)	21. 0	53·9	55·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 16. The Photographic Trace for the Vertical Force Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.
Dec. 18	
h m	° ′ ″
2. 16	20. 48. 45
3. 27	48. 0
3. 42	46. 30
6. 44	46. 50
7. 23	46. 5
11. 36	47. 45
12. 53	47. 0
13. 43	48. 15
14. 5	48. 0
14. 46	50. 0
15. 14	48. 20
15. 53	48. 30
16. 37	52. 0
17. 20	48. 0
18. 2	47. 40
18. 32	48. 55 ***
21. 26	46. 30 ***
23. 44	48. 35
23. 59	51. 0
Dec. 19	
0. 0	20. 51. 0
0. 37	50. 55 ***
1. 15	53. 10 ***
2. 20	54. 10
4. 15	52. 50
5. 14	54. 30
6. 8	53. 25
9. 38	52. 55
10. 28	54. 0
13. 13	55. 30
13. 32	54. 30
14. 36	54. 10
15. 0	56. 15
15. 59	54. 0
16. 5	54. 25 ***
16. 37	53. 30 ***
19. 45	53. 20
20. 10	54. 10
21. 30	52. 25
21. 48	52. 50
21. 58	48. 0 ***
22. 57	51. 0 ***
23. 43	54. 10 (†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 18	
h m	
2. 23	·1149
3. 1	·1148
3. 55	·1146
4. 17	·1153
6. 29	·1151
6. 53	·1154
7. 30	·1151
8. 28	·1152
9. 17	·1147
11. 49	·1146
12. 9	·1151
14. 7	·1146
15. 53	·1146
16. 20	·1141
17. 5	·1160
17. 52:	·1153
18. 30	·1159
19. 15	·1151
20. 2	·1152
20. 20	·1150
20. 35	·1153
20. 42	·1147
21. 6	·1152
21. 44	·1147
23. 45	·1145
23. 59	·1150
Dec. 19	
0. 0	·1150
0. 17	·1146
0. 32	·1146
1. 0	·1144
1. 14	·1142
1. 31	·1147
1. 47	·1138
2. 17	·1139
2. 22	·1136 ***
3. 18	·1139
3. 34	·1136
3. 51	·1138 ***
5. 9	·1139
5. 36	·1134
5. 55	·1138
6. 2	·1137 ***
6. 45	·1140
7. 23	·1145 ***
9. 13	·1144 ***
11. 4	·1145
11. 20	·1146
12. 8	·1145
13. 14	·1147
13. 43	·1145
14. 29	·1146

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Dec. 18	
h m	
3. 0	·02834*
9. 3	·02427*
10. 29	·02346
13. 34	·02282
16. 51	·02160
18. 12	·02218
21. 45	·02322
23. 14	·02320 (†)
Dec. 19	
0. 31	·02436
0. 52	·02440 ·02562
2. 52	·02517 ·03068
6. 55	·02944
10. 20	·02972
15. 39	·03114
19. 40	·03333
21. 3	·03322 (†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 19		
1. 0	54 ·8	55 ·9
3. 0	55 ·3	55 ·7
9. 0	54 ·5	54 ·0
21. 0	47 ·4	48 ·9

Greenwich Mean Solar Time.	Western Declination.
Dec. 20	
h m	° ′ ″
	(†)
0. 10	20. 54. 55
0. 54	55. 10
1. 45	52. 30
3. 31	53. 0
4. 4	51. 50
5. 18	53. 5
6. 3	52. 20
6. 15	51. 10
6. 30	51. 20
6. 52	52. 20
8. 19	52. 30
9. 0	51. 35
9. 23	52. 20
12. 9	51. 40
12. 30	52. 20
13. 45	52. 45
20. 0	51. 55
21. 0	50. 50
22. 12	50. 10
22. 44	50. 50
23. 2	50. 5
23. 48	51. 0
23. 59	50. 15
Dec. 21	
0. 0	20. 50. 0
1. 12	50. 20
1. 31	51. 30
2. 20	50. 55
3. 15	51. 50
4. 18	51. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 19	
h m	
14. 59	·1143
16. 17	·1146
17. 1	·1149 ***
18. 8	·1149 ***
19. 12	·1151
19. 41:	·1147
20. 1	·1150
20. 51	·1150
21. 17	·1148
22. 7	·1151 (†)
Dec. 20	
(†)	(†)
1. 0	·1153*
1. 15	·1151
2. 12	·1149
	(†)
3. 0	·1150
3. 38	·1154
5. 22	·1147
6. 28	·1153
7. 26	·1147
7. 37	·1151
8. 0	·1153
8. 9	·1150
8. 30	·1152
9. 2	·1151
9. 16	·1154
10. 57	·1149
11. 39	·1151
12. 38	·1150
13. 18	·1155
13. 44	·1152
14. 2	·1155
14. 38	·1154
15. 14	·1157
15. 30	·1156
16. 16	·1157
16. 32	·1160
17. 5	·1158
20. 43	·1162 (†)
21. 30	·1161*
23. 7	·1155
23. 37	·1154
23. 52	·1156
23. 59	·1156
Dec. 21	
0. 0	·1156
0. 37	·1155
1. 0	·1156
1. 33	·1156
1. 46	·1159
2. 28	·1147

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 20		
1. 0	48 ·6	
3. 0	50 ·1	
9. 0	48 ·9	
21. 30	42 ·5	
Dec. 21		
9. 0	44 ·0	
21. 0	42 ·0	

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 21		Dec. 21						
h m	° ′ ″	h m		h m		h m	°	°
4. 46	20. 51. 20	3. 0	·1154					
8. 31	49. 50	3. 40	·1157					
8. 52	50. 30	4. 8	·1159					
9. 27	48. 30	6. 0	·1162					
9. 57	50. 0	7. 1	·1156					
10. 16	49. 50	8. 46	·1158					
12. 4	50. 20	9. 11	·1166					
14. 49	49. 30	9. 35	·1160					
15. 19	51. 0	11. 23	·1158					
15. 59	48. 30	11. 36	·1161					
19. 13	48. 20	12. 23	·1161					
20. 43	46. 0	12. 56	·1163					
22. 57	47. 30	15. 21	·1165					
23. 14	50. 0	16. 8	·1170					
23. 59	50. 40	17. 33	·1169					
		17. 53	·1167					
		19. 7	·1165					
		20. 30	·1163					
		21. 19	·1163					
		22. 0	·1155					
		22. 28	·1161					
		22. 37	·1161					
		23. 30	·1174					
		23. 54	·1175					
			(†)					
Dec. 22		Dec. 22				Dec. 22		
0. 0	20. 50. 40		(†)			1. 0	45·0	
0. 30	49. 35	1. 0	·1191			3. 0	46·6	
0. 52	50. 30	1. 15	·1190			9. 0	47·9	
1. 3	49. 10	1. 38	·1186			21. 0	44·1	
1. 28	50. 0	2. 14	·1190					
1. 42	49. 0	3. 32	·1189					
2. 22	49. 25	3. 57	·1192					
4. 37	48. 0	5. 53	·1186					
5. 48	48. 0	6. 8	·1188					
6. 20	46. 55	6. 22	·1186					
6. 46	48. 25	6. 44	·1191					
9. 12	49. 30	7. 1	·1190					
10. 9	47. 50	8. 48	·1186					
10. 42	49. 10	9. 46	·1189					
11. 53	49. 0	10. 1	·1185					
12. 18	47. 35	10. 51	·1188					
12. 26	48. 5	11. 18	·1186					
12. 47	47. 30	11. 54	·1191					
14. 31	50. 40	12. 8	·1189					
15. 32	50. 30	12. 22	·1191					
15. 59	48. 45	12. 39	·1189					
16. 14	49. 10	14. 35	·1191					
16. 20	52. 30	15. 23	·1196					
16. 46	50. 30	16. 8	·1195					
16. 57	52. 0	16. 20	·1204					
17. 10	51. 0	16. 49	·1214					
17. 33	53. 30	17. 28	·1204					
18. 22	50. 30	17. 44	·1212					
18. 38	51. 10	18. 14	·1216					
19. 0	49. 30	18. 22	·1208					
19. 11	50. 0	19. 6	·1187					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 22		Dec. 22						
h m	° ′ ″	h m		h m		h m	°	°
19. 21	20. 52. 0	19. 14	·1193					
19. 45	52. 50	19. 43	·1184					
19. 57	52. 0	20. 4	·1167					
20. 23	53. 50	20. 17	·1178					
21. 1	48. 40	20. 28	·1162					
21. 22	52. 15	20. 50	·1162					
21. 47	48. 0	21. 17	·1181					
22. 0	49. 40	21. 53	·1174					
22. 20	47. 15	22. 30	·1205					
	***	22. 56	·1200					
22. 57	48. 0	23. 3	·1203					
23. 22	49. 50	23. 25	·1184					
23. 35	51. 55	23. 47	·1182					
23. 59	52. 30	23. 59	·1186					
Dec. 23		Dec. 23				Dec. 23		
0. 0	20. 52. 30	0. 0	·1186			1. 0	47·8	
0. 15	53. 0	0. 10	·1192			3. 0	49·6	
0. 43	51. 30	0. 38	·1196			9. 0	50·0	
1. 4	51. 25		(†)			21. 0	45·5	
1. 30	48. 35	1. 0	·1200*			22. 0	45·5	
	***	1. 30	·1201			23. 0	46·5	
2. 22	47. 25	1. 50	·1197					
	***	2. 15	·1200					
3. 26	49. 50	2. 32	·1198					
3. 38	48. 30	2. 53	·1202					
	***	3. 8	·1192					
4. 26	45. 0	3. 23	·1195					
	***	3. 43	·1180					
5. 7	49. 20		***					
	***	4. 38	·1206					
9. 1	47. 0	4. 46	·1203					
	***	5. 13	·1209					
9. 55	48. 30	5. 16	·1196					
10. 14	47. 30	5. 39	·1201					
10. 38	48. 0	5. 44	·1199					
11. 0	46. 10	5. 59	·1200					
11. 30	47. 35	6. 0	·1204					
	***	6. 7	·1202					
18. 44	48. 0	6. 32	·1201					
20. 23	47. 0	6. 39	·1208					
21. 1	47. 55	6. 47	·1190					
21. 29	46. 10	6. 52	·1194					
21. 33	47. 10	8. 24	·1201					
21. 44	46. 0	8. 31	·1198					
21. 52	47. 0	9. 8	·1195					
22. 54	45. 0	9. 17	·1197					
23. 40	51. 0	9. 31	·1196					
23. 59	48. 55	9. 43	·1200					
		9. 58	·1193					
		10. 28	·1197					
		10. 45	·1191					
		11. 4	·1199					
		11. 26	·1199					
		11. 40	·1191					
		12. 23	·1193					
		12. 32	·1196					
		12. 38	·1194					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
h m	° ′ ″	Dec. 23 h m		h m		h m	°	°
		12. 50	·1196					
		13. 10	·1194					
		13. 23	·1196					
		13. 30	·1199					
		13. 52	·1195					
		14. 10	·1198					
		14. 11	·1194					
		14. 40	·1195					
		15. 1	·1198					
		15. 29	·1197					
		15. 47	·1201					
		16. 45	·1204					
		16. 52	·1206					
		16. 59	·1203					
		17. 35	·1207					
		18. 17	·1204					
		19. 59	·1204					
		20. 34	·1195					
		21. 20	·1198					
		21. 28	·1202					
		21. 35	·1195					
		21. 40	·1199					
		22. 14	·1192					
		22. 20	·1196					
		23. 0	·1188					
			(†)					
Dec. 24		Dec. 24				Dec. 24		
0. 0	20. 49. 0		(†)			0. 0	47	·0
0. 8	49. 25	1. 0	·1186			1. 0	47	·9
0. 53	45. 15	1. 47	·1164			3. 0	50	·0
1. 37	47. 50	1. 59	·1159			6. 0	50	·3
1. 54	46. 50	2. 5	·1161			9. 0	50	·0
2. 6	48. 45	2. 19	·1156			12. 0	49	·5
2. 27	44. 30	2. 43:	·1172			23. 7	49	·0
3. 0	47. 0	3. 14	·1169					
3. 24	44. 30	3. 45:	·1178					
3. 42	46. 15	4. 11	·1150					
4. 0	45. 25	4. 43	·1173					
4. 18	42. 50	5. 15	·1170					
5. 7	46. 20	5. 35:	·1176					
5. 18	45. 15	6. 0	·1157					
5. 37	46. 50	6. 12	·1148					
6. 14	38. 0	6. 38	·1168					
6. 33	37. 10	6. 54	·1174					
7. 3	41. 30	7. 1	·1157					
7. 15	40. 25	7. 16	·1159					
7. 25	40. 40	7. 42:	·1141					
7. 55	34. 10	7. 59	·1150					
8. 20	36. 30	8. 9	·1151					
8. 41	40. 15	8. 29	·1155					
9. 2	39. 20	8. 43	·1153					
9. 30	40. 25	8. 57	·1159					
9. 57	36. 50	9. 6	·1157					
10. 7	32. 10	9. 28	·1157					
10. 14	33. 10	9. 38	·1163					
10. 16	32. 50	9. 48	·1165					
10. 27	34. 40	10. 0	·1146					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
Dec. 24 h m	° ′ ″	Dec. 24 h m		h m		h m	°	°
11. 8	20. 40. 30	10. 22	·1169					
12. 40	23. 10	10. 28	·1161					
12. 45	26. 0	10. 51	·1198					
13. 3	29. 45	10. 53	·1194					
13. 23	30. 45	11. 0	·1201					
14. 14:	24. 30	11. 20	·1153					
14. 45	35. 5	11. 33	·1144					
14. 55	34. 10	11. 53	·1170					
		12. 0	·1166					
15. 17	36. 20	12. 5	·1171					
15. 28	34. 10	12. 19	·1154					
15. 46	40. 25	12. 26	·1156					
16. 3	44. 50	12. 34	·1146					
16. 45	45. 30	12. 59	·1140					
17. 0	42. 55	13. 25	·1172					
17. 26:	38. 55	13. 43	·1142					
17. 57	44. 55	13. 52	·1137					
18. 7	45. 0	14. 32	·1171					
18. 56	54. 5	14. 48	·1155					
19. 3	52. 35	15. 8	·1157					
19. 27	56. 50	15. 24	·1152					
19. 33	55. 50	15. 31	·1145					
19. 46	56. 30	15. 57	·1160					
21. 14:	50. 0	16. 2	·1159					
22. 18	54. 0	16. 17	·1165					
22. 32	51. 10	16. 22	·1160					
23. 2	55. 0	16. 48	·1191					
23. 10	53. 20	16. 57	·1182					
23. 30	20. 54. 30	17. 34	·1213					
23. 59	21. 5. 10	17. 49	·1210					
		18. 13	·1184					
		18. 40	·1191					
		18. 49	·1181					
		19. 2	·1181					
		19. 16	·1171					
		19. 30	·1181					
		19. 47	·1181					
		20. 10:	·1173					
		20. 23	·1179					
		20. 32	·1175					
		20. 40	·1177					
		21. 9	·1176					
		21. 52	·1162					
		21. 56	·1167					
		22. 7	·1157					
		22. 34	·1169					
		22. 43	·1158					
			(†)					
Dec. 25		Dec. 25				Dec. 25		
0. 0	21. 5. 0		(†)			7. 41	49	·0
0. 43	20. 54. 10	0. 59	·1170			21. 0	47	·0
2. 12	53. 45	1. 7	·1172					
2. 31	52. 45	1. 37	·1186					
3. 3	53. 0	2. 18	·1195					
3. 20	53. 55	2. 33	·1187					
3. 52	53. 10	2. 47	·1188					
4. 13	45. 0	3. 0	·1182					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 25		Dec. 25						
h m	° ′ ″	h m		h m		h m	°	°
4. 16	20. 46. 0	3. 15	·1183					
4. 25	41. 0	3. 38	·1178					
4. 33	44. 55	4. 0	·1179					
4. 45	46. 0	4. 11	·1166					
4. 56	44. 10	4. 24	·1187					
5. 1	45. 55	4. 26	·1183					
5. 12	42. 10	4. 42	·1199					
5. 41	51. 55	4. 58	·1173					
5. 53	50. 30	5. 5	·1181					
6. 0	51. 45	5. 16	·1171					
6. 12	50. 10	5. 35:	·1187					
6. 25	51. 30	5. 56	·1162					
6. 42	51. 30	6. 1	·1164					
7. 27	46. 50	6. 15	·1160					
7. 41	48. 40	6. 25	·1162					
8. 22	50. 0	6. 34	·1159					
8. 44	49. 0	7. 0	·1168					
9. 44	49. 15	7. 6	·1182					
10. 3	48. 15	7. 25	·1171					
10. 30	48. 45	7. 47	·1188					
11. 2	46. 20	7. 58	·1181					
11. 27	47. 45	8. 10	·1180					
12. 23	45. 0	8. 18	·1186					
12. 53	45. 30	8. 30	·1182					
13. 53	50. 10	9. 0	·1188 ***					
14. 15	47. 35							
14. 35	51. 0	9. 58	·1184 ***					
15. 15	47. 0							
18. 30	47. 10	10. 31	·1195					
19. 3	51. 25	11. 0	·1187 ***					
19. 40	47. 0							
21. 44	44. 0	11. 20	·1189 ***					
23. 14	48. 5							
	(†)	12. 20	·1185 ***					
		13. 0	·1191					
		13. 8	·1189					
		13. 35	·1190					
		13. 52	·1198 ***					
		14. 17	·1191 ***					
		15. 16	·1196 ***					
		16. 22	·1191 ***					
		16. 43	·1194 ***					
		17. 52	·1198 ***					
		18. 32	·1198					
		19. 7	·1186					
		19. 29	·1192					
		19. 40	·1189 ***					
		20. 40	·1196					
		21. 8	·1195					
		21. 30	·1191					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Dec. 25						
h m	° ′ ″	h m		h m		h m	°	°
		22. 49	·1163					
		23. 0	·1166					
		23. 8	·1164					
		23. 19	·1172					
		23. 59	·1171					
		Dec. 26				Dec. 26		
		0. 0	·1171			1. 0	49·5	
		0. 10	·1174			3. 0	51·0	
		0. 17	·1170			9. 25	51·0	
		0. 42	·1184			21. 0	46·5	
		0. 53	·1170					
		1. 4	·1185					
		1. 29	·1197					
		1. 38	·1184					
		1. 47	·1190					
		1. 53	·1178					
		2. 0	·1172					
		2. 5	·1179					
		2. 9	·1173					
		2. 22	·1184					
		2. 32	·1173					
		2. 54	·1179					
		3. 0	·1175					
		3. 13	·1190					
		3. 22	·1184					
		3. 30	·1191					
		3. 37	·1178					
		3. 45	·1184					
		3. 52	·1162					
		4. 7	·1196					
		4. 28	·1186					
		4. 32	·1190					
		5. 1	·1179					
		5. 22	·1187					
		5. 32	·1183					
		5. 46	·1182					
		6. 7	·1171					
		6. 45	·1165					
		7. 30	·1178					
		7. 47	·1174					
		8. 0	·1192					
		8. 5	·1182					
		8. 18	·1191					
		8. 32	·1215					
		9. 2	·1185					
		9. 23	·1189					
		9. 43	·1188					
		10. 28	·1189					
		10. 42	·1193					
		11. 28	·1188					
		12. 8	·1190					
		13. 0	·1190					
		17. 15	·1195					
		18. 1	·1191					
		18. 45	·1193					
		20. 47	·1190					
		21. 15	·1203					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 26, 27 and 29. The Declination Magnet was under adjustment.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. of H. F. Magnet.	of V. F. Magnet.
h m	′ ″	Dec. 26 h m		h m		h m	°	°
		22. 31	·1200					
			(†)					
		23. 59	·1201					
		Dec. 27				Dec. 27		
		0. 0	·1201			1. 0	48 ·5	
		0. 17	·1202			3. 0	51 ·0	
		0. 25	·1198			9. 0	51 ·8	
		2. 33	·1204			22. 0	50 ·0	
		3. 0	·1199					
		3. 59	·1199					
		6. 52	·1196					
		7. 43	·1199					
		15. 16	·1198					
		15. 46	·1201					
		15. 58	·1200					
		16. 45	·1202					
		18. 8	·1200					
		19. 17	·1198					
		21. 2	·1194					
		21. 23	·1195					
		22. 7	·1193					
		22. 24	·1198					
		22. 37	·1192					
		23. 13	·1194					
		23. 59	·1196					
Dec. 28		Dec. 28				Dec. 28		
0. 0	20. 53. 10	0. 0	·1196			9. 0	51 ·0	
1. 45	53. 30	1. 23	·1203			21. 0	49 ·2	
3. 17	52. 0	1. 49	·1205					
4. 33	53. 15	3. 14	·1200					
6. 16	50. 5	3. 26	·1202					
7. 52	49. 10	4. 54	·1198					
8. 15	50. 0	5. 38	·1201					
8. 45	48. 30	7. 3	·1203					
11. 59	48. 0	7. 45	·1200					
20. 59	49. 0	7. 53	·1201					
21. 50	51. 25	8. 21	·1195					
22. 38	51. 55	8. 45	·1198					
	(†)	9. 35	·1197					
		10. 2	·1199					
		10. 21	·1198					
		10. 44	·1200					
		11. 0	·1197					
		11. 28	·1201					
		11. 46	·1198					
		12. 8	·1201					
		12. 30	·1198					
		13. 38	·1197					
		14. 17	·1203					
		14. 39	·1202					
		18. 23	·1206					
		19. 44	·1202					
		20. 20	·1193					
		20. 59	·1198					
		21. 30	·1191					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. of H. F. Magnet.	of V. F. Magnet.
h m	′ ″	Dec. 29 h m		h m		Dec. 20 h m	°	°
			(†)			1. 0	51 ·1	
		1. 0	·1197			3. 0	52 ·9	
		1. 30	·1198			9. 18	51 ·8	
		2. 23	·1198			21. 0	47 ·0	
		2. 46	·1204					
		3. 15	·1198					
		4. 36	·1194					
		9. 20	·1201					
		9. 48	·1197					
		10. 31	·1198					
		10. 36	·1202					
		11. 6	·1203					
		11. 15	·1200					
		11. 23	·1203					
		11. 36	·1197					
		11. 52	·1197					
		12. 10	·1203					
		12. 30	·1198					
		12. 49	·1200					
		12. 59	·1198					
		15. 2	·1202					
		15. 16	·1205					
		15. 30	·1202					
		17. 25	·1211					
		18. 20	·1210					
		18. 42	·1206					
		18. 58	·1208					
		20. 10	·1207					
		20. 27	·1205					
		21. 22	·1199					
		22. 42	·1197					
		23. 1	·1192					
		23. 25	·1192					
		23. 59	·1198					
Dec. 30		Dec. 30				Dec. 30		
	(†)	0. 0	·1198			1. 0	49 ·5	
2. 6	20. 57. 15		(†)			3. 0	50 ·7	
	* *	0. 45	·1206			9. 0	49 ·3	
3. 8	56. 0	1. 8	·1212			21. 0	44 ·5	
	* *	2. 7	·1209			22. 0	44 ·2	
4. 12	53. 25	2. 14	·1219			23. 0	44 ·0	
	* *	2. 30	·1214					
4. 23	54. 5	3. 32	·1226					
	* *	3. 39	·1233					
5. 3	53. 15	4. 7	·1238					
	* *	4. 19	·1236					
5. 33	54. 15	4. 26	·1237					
6. 50	52. 25	4. 38	·1233					
	* *	5. 16	·1235					
7. 23	53. 15	5. 36	·1226					
	* *	6. 17	·1228					
13. 42	50. 35	6. 38	·1225					
14. 0	52. 40	7. 0	·1227					
14. 24	51. 5	7. 15	·1222					
16. 17	52. 15	7. 24	·1224					
	* *	7. 31	·1224					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

December 29. The Declination Magnet was under adjustment.

Greenwich Mean Solar Time.	Western Declination.
Dec. 30	
h m	° ′ ″
21. 24	20. 52. 15
21. 45	49. 45
	(†)
Dec. 31	
	(†)
1. 35	20. 55. 5
2. 55	52. 35
4. 7	52. 35
4. 28	53. 15
5. 43	53. 15
5. 58	53. 55
6. 7	53. 5
6. 29	53. 55
6. 45	53. 15
7. 8	54. 15
7. 28	53. 40
7. 45	54. 15
9. 1	52. 15
9. 47	51. 45
10. 5	53. 25
10. 58	51. 25
11. 8	52. 15
11. 25	52. 5
11. 40	53. 5
12. 0	52. 25
12. 7	50. 0
12. 30	55. 15
13. 0	49. 45
13. 15	52. 15
13. 27	51. 30
13. 35	51. 35
13. 24	50. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 30	
h m	
8. 1	·1229
8. 45	·1227
9. 4	·1222
9. 16	·1224
9. 46	·1219
10. 0	·1220
11. 5	·1216
11. 30	·1213
11. 47	·1212
12. 17	·1217
12. 30	·1222
12. 52	·1215
13. 9	·1218
13. 39	·1217
13. 50	·1221
14. 43	·1218
16. 25	·1225
16. 38	·1223
18. 8	·1229
19. 5	·1224
19. 26	·1222
20. 52	·1221
21. 11	·1219
21. 41	·1218
23. 20	·1222
	(†)
Dec. 31	
	(†)
0. 18	·1108
0. 33	·1120
1. 2	·1106
1. 19	·1106
1. 35	·1099
1. 45	·1105
2. 17	·1095
3. 8	·1112
3. 28	·1106
3. 37	·1120
4. 1	·1124
4. 25	·1115
4. 45	·1120
4. 59	·1130
5. 15	·1125
5. 25	·1130
5. 35	·1128
5. 44	·1135
6. 3	·1140
6. 17	·1135
6. 31	·1133
	***
7. 10:	·1145
7. 47	·1136
8. 33:	·1141
	***
9. 5	·1131

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 31		
0. 0	45·1	
1. 0	46·1	
2. 0	47·0	
3. 0	48·0	
6. 0	49·6	
9. 0	48·3	
12. 0	47·6	
18. 0	46·2	
21. 0	46·7	

Greenwich Mean Solar Time.	Western Declination.
Dec. 31	
h m	° ′ ″
14. 0	20. 50. 10
14. 9	52. 40
14. 33	51. 50
14. 40	54. 15
15. 2	52. 25
	***
16. 23	53. 40
16. 39	52. 25
16. 47	54. 50
17. 17	51. 25
17. 29	51. 55
17. 52	51. 10
	***
18. 17	52. 5
18. 28	54. 15
18. 42	52. 25
18. 57	53. 45
	***
19. 32	53. 25
19. 40	51. 30
19. 50	53. 45
20. 2	50. 15
20. 12	54. 35
20. 22	54. 45
20. 33	52. 15
20. 43	53. 45
20. 45	53. 25
20. 48	53. 15
20. 52	54. 25
21. 8	52. 35
	***
21. 23	55. 45
21. 28	54. 35
21. 36	55. 25
22. 15	54. 5
22. 26	55. 0
22. 48	53. 55
23. 22	58. 35
23. 59	55. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 31	
h m	
9. 22	·1134
9. 45	·1124
10. 8	·1121
10. 15	·1116
10. 27	·1123
10. 56	·1117
11. 38	·1123
11. 46	·1114
12. 0	·1113
12. 1	·1091
12. 22	·1119
12. 52	·1097
13. 11	·1110
13. 42	·1094
	***
14. 0	·1094
14. 8	·1101
14. 21	·1090
	***
14. 32	·1086
14. 39	·1092
	***
15. 7	·1088
	***
15. 29	·1073
15. 33	·1078
15. 39	·1070
15. 47	·1073
15. 55	·1062
16. 15	·1060
	***
16. 32	·1080
16. 38	·1074
16. 46	·1081
17. 0	·1071
17. 17	·1083
17. 29	·1078
17. 44	·1080
17. 47	·1076
18. 6	·1072
18. 13	·1078
18. 18	·1074
18. 26	·1079
19. 6	·1074
19. 26	·1060
19. 52	·1057
20. 2	·1069
20. 22	·1062
20. 35	·1070
20. 38	·1054
20. 50	·1052
20. 52	·1057
21. 0	·1049
21. 15	·1068
21. 25	·1060
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 31. The series on December 31 of the Horizontal-Force-Magnet is about 0·01 smaller than that ending December 30. The cause of the change is unknown.

December 31d. 21h. The Horizontal-Force-Magnet was removed for adjustment.

TABLE showing the APPROXIMATE MEAN MONTHLY WESTERN DECLINATION, at the ROYAL OBSERVATORY, GREENWICH, in the Year 1862.

MONTH.	1862.
	° ′ ″
January	20. 58. 37
February	58. 21
March	57. 32
April	50. 43
May	49. 5
June	52. 31
July	49. 39
August	51. 46
September	50. 33
October	50. 6
November	50. 9
December	49. 35
Mean	20. 52. 23

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

OF THE

MAGNETIC DIP.

1862.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1862.

Day and Approximate Hour, 1862.		Needle.	Length of Needle.	Magnetic Dip	Observer.
	d h			° ′ ″	
January	23. 22	C 3	6 inches	68. 11. 24	H C
	26. 22	C 1	6 ,,	68. 10. 20	H C
	26. 23	C 3	6 ,,	67. 53. 42	H C
	27. 0	C 2	6 ,,	68. 12. 56	H C
February	6. 0	C 1	6 ,,	68. 8. 46	H C
	7. 0	C 2	6 ,,	68. 11. 36	H C
	8. 0	C 3	6 ,,	67. 51. 34	H C
	15. 0	C 3	6 ,,	67. 58. 42	H C
	20. 0	C 1	6 ,,	68. 10. 30	H C
	21. 23	C 2	6 ,,	68. 12. 57	H C
	24. 22	C 3	6 ,,	67. 57. 3	H C
	25. 23	C 1	6 ,,	68. 3. 57	H C
March	1. 0	C 2	6 ,,	68. 21. 20	H C
	2. 22	C 1	6 ,,	68. 12. 31	H C
	6. 23	C 3	6 ,,	68. 3. 55	H C
	7. 0	C 1	6 ,,	68. 7. 42	H C
	10. 23	C 2	6 ,,	68. 16. 52	H C
April	3. 21	C 3	6 ,,	68. 3. 23	H C
	3. 22	C 3	6 ,,	68. 2. 36	N
	4. 22	C 1	6 ,,	68. 10. 2	H C
	5. 0	C 1	6 ,,	68. 7. 42	N
	23. 22	C 3	6 ,,	68. 12. 2	H C
	24. 0	C 2	6 ,,	68. 3. 43	H C
	24. 1	C 1	6 ,,	68. 8. 23	H C
May	19. 23	C 1	6 ,,	67. 57. 44	H C
	21. 21	C 2	6 ,,	68. 10. 40	H C
	21. 22	C 3	6 ,,	68. 3. 38	N
	21. 23	C 1	6 ,,	68. 4. 33	N
	26. 23	C 2	6 ,,	68. 10. 54	H C
	27. 22	C 1	6 ,,	68. 8. 51	N
	29. 1	C 2	6 ,,	68. 2. 48	N
	29. 21	C 1	6 ,,	68. 19. 11	H C
	30. 0	C 2	6 ,,	68. 0. 16	N
	30. 1	C 3	6 ,,	68. 0. 7	N
June	4. 2	C 1	6 ,,	68. 10. 54	N
	9. 23	D 1	3 ,,	68. 5. 34	H C
	11. 1	D 2	3 ,,	67. 57. 55	H C
	12. 23	D 3	3 ,,	68. 4. 58	H C
	13. 21	D 1	3 ,,	68. 4. 8	H C
	13. 22	D 2	3 ,,	68. 15. 42	H C
	13. 23	D 3	3 ,,	68. 19. 12	H C
	26. 1	D 1	3 ,,	67. 54. 0	N
July	1. 23	D 2	3 ,,	68. 14. 5	H C
	3. 23	D 1	3 ,,	68. 16. 25	H C
	4. 0	D 2	3 ,,	68. 12. 12	H C
	4. 2	D 3	3 ,,	68. 15. 15	H C
	6. 23	D 1	3 ,,	68. 0. 15	H C
	7. 0	D 2	3 ,,	68. 9. 59	H C
	7. 1	C 1	6 ,,	68. 16. 33	H C
	7. 2	C 2	6 ,,	68. 19. 28	H C
	9. 23	C 2	6 ,,	68. 19. 9	H C
	10. 0	B 1	9 ,,	68. 14. 45	H C
	10. 1	B 2	9 ,,	68. 10. 17	H C
	14. 22	B 1	9 ,,	68. 15. 15	N
July	14. 23	C 1	6 inches	68. 16. 42	N
	15. 0	D 1	3 ,,	68. 20 ·25	N
	15. 23	B 2	9 ,,	68. 9. 21	N
	16. 0	C 2	6 ,,	68. 14. 34	N
	16. 1	D 2	3 ,,	68. 15. 14	N
	17. 23	D 1	3 ,,	68. 2. 58	H C
	18. 0	C 1	6 ,,	68. 10. 59	H C
	18. 1	B 1	9 ,,	68. 16. 12	H C
	21. 23	B 2	9 ,,	68. 5. 10	H C
	22. 0	C 2	6 ,,	68. 6. 57	H C
	22. 1	D 2	3 ,,	68. 10. 54	H C
	30. 0	D 1	3 ,,	68. 8. 36	N
	30. 1	C 1	6 ,,	67. 59. 13	N
August	4. 1	B 1	9 ,,	68. 15. 18	N
	6. 22	C 1	6 ,,	68. 12. 39	N
	6. 23	D 1	3 ,,	68. 9. 7	N
	7. 1	C 2	6 ,,	67. 58. 49	N
	7. 22	B 2	9 ,,	68. 15. 14	N
	7. 23	C 2	6 ,,	68. 8. 44	N
	8. 0	D 2	3 ,,	68. 8. 48	N
	11. 0	D 3	3 ,,	68. 17. 25	N
	11. 2	C 3	6 ,,	68. 8. 14	N
	11. 21	C 1	6 ,,	67. 58. 15	N
	11. 22	C 2	6 ,,	68. 13. 9	N
	11. 23	C 3	6 ,,	67. 54. 45	N
	21. 1	B 1	9 ,,	68. 14. 58	N
	25. 1	B 2	9 ,,	68. 12. 36	N
	25. 2	C 2	6 ,,	68. 12. 1	N
September	6. 1	C 1	6 ,,	68. 19. 16	N
	6. 2	D 1	3 ,,	68. 16. 47	N
	9. 0	D 2	3 ,,	68. 12. 25	N
	9. 2	B 1	9 ,,	68. 1. 43	N
	15. 2	B 2	9 ,,	68. 14. 3	N
	17. 22	C 2	6 ,,	68. 3. 13	N
	18. 0	D 2	3 ,,	68. 2. 50	N
	18. 1	D 1	3 ,,	68. 7. 40	N
October	6. 2	D 1	3 ,,	68. 10. 24	N
	24. 2	B 2	9 ,,	68. 12. 42	N
	24. 3	B 1	9 ,,	68. 12. 10	N
	25. 0	C 1	6 ,,	68. 20. 22	N
	25. 1	C 2	6 ,,	68. 8. 55	N
November	16. 22	B 1	9 ,,	68. 12. 26	N
	25. 2	B 1	9 ,,	68. 12. 8	N
	27. 0	B 1	9 ,,	68. 8. 4	N
	27. 2	C 1	6 ,,	68. 9. 45	N
December	1. 23	C 1	6 ,,	68. 12. 59	N
	2. 0	C 2	6 ,,	68. 16. 35	N
	2. 1	C 3	6 ,,	68. 32. 26	N
	2. 22	C 3	6 ,,	68. 13. 53	N
	2. 23	C 2	6 ,,	68. 8. 27	N
	3. 0	D 1	3 ,,	68. 16. 18	N
	3. 1	D 2	3 ,,	68. 8. 45	N
	12. 2	D 1	3 ,,	68. 32. 16	N
	30. 2	B 1	9 ,,	68. 13. 6	N
	31. 2	C 1	6 ,,	68. 20. 17	N

From October 27 to November 15 the instrument was in the hands of its maker.

The initials H C and N are those of Mr. Henry Criswick and Mr. W. C. Nash.

MONTHLY MEANS of MAGNETIC DIPS, at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1862.

Month, 1862.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.	C 2, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January	....	..	....	..	68. 10. 20	1	68. 12. 56	1
February	....	..	....	..	68. 7. 44	3	68. 12. 17	2
March	....	..	....	..	68. 10. 7	2	68. 19. 6	2
April	....	..	....	..	68. 8. 42	3	68. 3. 43	1
May	....	..	....	..	68. 7. 35	4	68. 6. 17	4
June	....	..	....	..	68. 10. 54	1	....	..
July	68. 15. 24	3	68. 8. 16	3	68. 10. 52	4	68. 15. 2	4
August	68. 15. 8	2	68. 13. 55	2	68. 5. 27	2	68. 8. 11	4
September	68. 1. 43	1	68. 14. 3	1	68. 19. 16	1	68. 3. 13	1
October	68. 12. 10	1	68. 12. 42	1	68. 20. 22	1	68. 8. 55	1
November	68. 10. 53	3	....	..	68. 9. 45	1	....	..
December	68. 13. 6	1	....	..	68. 16. 38	2	68. 12. 31	2
Means	(68. 10. 14)	..	(68. 9. 54)	..	68. 10. 19	25	68. 10. 40	22

Month, 1862.	C 3, 6-inch Needle, loaded.	Number of Observations.	D 1, 3-inch Needle.	Number of Observations.	D 2, 3-inch Needle.	Number of Observations.	D 3, 3-inch Needle, loaded.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January	68. 2. 54	2	....	..	....	..	....	..
February	67. 55. 34	3	....	..	....	..	....	..
March	68. 3. 55	1	....	..	....	..	....	..
April	68. 6. 0	3	....	..	....	..	....	..
May	68. 1. 53	2	....	..	....	..	....	..
June	....	..	68. 1. 14	3	68. 6. 48	2	68. 12. 5	2
July	....	..	68. 9. 44	5	68. 12. 29	5	68. 15. 15	1
August	68. 1. 30	2	68. 9. 7	1	68. 8. 48	1	68. 17. 25	1
September	....	..	68. 12. 13	2	68. 7. 38	2	....	..
October	....	..	68. 10. 24	1	....	..	....	..
November	....	..	....	..	....	..	....	..
December	68. 23. 10	2	68. 24. 17	2	68. 8. 45	1	....	..
Means	(68. 5. 44)	..	(68. 8. 8)	..	(68. 8. 26)	..	(68. 15. 12)	..

For this table the monthly means have been formed without reference to the hour at which the observation was made on each day, as in preceding years no certain difference was found between observations taken at 21^h and at 3^h.

In combining the monthly results, to form the annual means, weights have been given proportional to the number of observations.

The means in brackets have been found by applying to the mean of the observed results a correction deduced by taking the difference between the mean result for the same months and that of the whole year, using C 1 as a standard.

YEARLY MEANS of MAGNETIC DIPS for each of the NEEDLES, and GENERAL MEAN.

Lengths of the several Sets of Needles.	Needles.	Mean Dip from Observations with each Needle during the Year, uncorrected.	Number of Observations.	Adopted yearly Mean Dip for each Needle.	Including all Needles.		Excluding loaded Needles.	
					Mean yearly Dip from each Set of Needles.	Mean yearly Dip from all the Sets of Needles.	Mean yearly Dip from each Set of Needles.	Mean yearly Dip from all the Sets of Needles.
		° ′ ″		° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″
9-inch Needles	B 1	68. 12. 22	11	68. 10. 14	68. 10. 4		68. 10. 4	
	B 2	68. 11. 20	7	68. 9. 54				
6-inch Needles	C 1	68. 10. 19	25	68. 10. 19	68. 8. 54	68. 9. 50	68. 10. 30	68. 9. 37
	C 2	68. 10. 40	22	68. 10. 40				
	C 3	68. 4. 30	15	68. 5. 44				
3-inch Needles	D 1	68. 10. 22	14	68. 8. 8	68. 10. 35		68. 8. 17	
	D 2	68. 9. 54	11	68. 8. 26				
	D 3	68. 14. 12	4	68. 15. 12				

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1862.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, observed with the OLD APPARATUS.

Month and Day, 1862.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft. in.	°	° ′ ″	s		°	
January 30	Lateral	1. 0	51·9	8. 20. 26·40	5·953	100	50·5	N
	Lateral	1. 6		2. 30. 3·94	5·980	100	51·8	
January 31	Lateral	1. 0	55·0	8. 21. 8·67	5·963	100	54·0	N
	Lateral	1. 6		2. 29. 44·73	5·942	100	55·0	
February 3	Lateral	1. 0	54·1	8. 20. 14·47	5·964	100	53·3	N
	Lateral	1. 6		2. 29. 8·29	5·932	100	54·5	

The lengths of 1 foot and 1 foot 6 inches answer to 304·8 and 457·2 millimètres respectively.
The initial N is that of Mr. W. C. Nash.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, with the OLD APPARATUS.

Month and Day, 1862.	In English Measure.								Value of X in French Measure.
	Apparent Value of a.	Apparent Value of b.	Adopted Value of a, assuming the Value of b ($-0{\cdot}00259$) as applicable to all.	Log. $\frac{1}{2}a$ / Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. mX.	Value of X.	Value of m.	
January 30	+0·14906	−0·00400	+0·14783	8·86873	5·967	0·03703	3·838	0·2837	1·770
31	+0·14833	−0·00307	+0·14792	8·86899	5·953	0·03907	3·846	0·2845	1·773
February 3	+0·14746	−0·00246	+0·14758	8·86503	5·948	0·03980	3·867	0·2834	1·783

The value of b employed in these reductions, namely $-0{\cdot}00259$, is the mean from the observations taken between 1861, July 17, and 1862, February 3, when the series with the old apparatus ended.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, made with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1862.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft.	°	° ′ ″	s		°	
January 29	Lateral	1·0	50·2	16. 8. 57	4·744	150	49·5	H C
	Lateral	1·3		7. 16. 43				
January 30	Lateral	1·0	49·9	16. 8. 59	4·749	150	50·2	H C
	Lateral	1·3		7. 16. 44				
February 1	Lateral	1·0	52·1	16. 8. 22	4·754	150	52·0	H C
	Lateral	1·3		7. 17. 5	4·752	150	53·2	

The lengths of 1 foot and 1·3 foot answer to 304·8 and 396·2 millimètres respectively.
The initials H C are those of Mr. Henry Criswick.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, observed with the KEW UNIFILAR INSTRUMENT—*concluded*.

Month and Day, 1862.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft.	°	° ′ ″			°	
March 31	Lateral	1·0	56·9	16. 4. 2	4·686	150	56·4	H C
	Lateral	1·3		7. 15. 29	4·727	150	59·0	
April 25	Lateral	1·0	61·1	16. 1. 16	4·724	150	60·3	H C
	Lateral	1·3		7. 13. 42				
May 28	Lateral	1·0	63·1	15. 56. 36	4·771	150	64·0	H C
	Lateral	1·3		7. 11. 52	4·769	150	65·0	
June 3	Lateral	1·0	66·1	15. 57. 5	4·781	150	68·0	H C
	Lateral	1·3		7. 11. 33	4·771	150	68·0	
June 12	Lateral	1·0	58·5	15. 53. 10	4·780	150	58·0	H C
	Lateral	1·3		7. 9. 14	4·785	150	59·0	
June 25	Lateral	1·0	61·1	15. 52. 26	4·786	150	60·0	H C
	Lateral	1·3		7. 9. 17	4·788	150	63·0	
July 3	Lateral	1·0	60·7	15. 53. 51	4·784	150	61·0	H C
	Lateral	1·3		7. 9. 49	4·782	150	60·5	
August 15	Lateral	1·0	68·4	15. 48. 3	4·800	150	67·0	N
	Lateral	1·3		7. 7. 17	4·810	150	68·5	
December 24	Lateral	1·0	49·6	15. 42. 0	4·809	150	46·6	N
	Lateral	1·3		7. 4. 22	4·818	150	48·9	

The lengths of 1 foot and 1·3 foot answer to 304·8 and 396·2 millimètres respectively.
The initials H C and N are those of Mr. Henry Criswick and Mr. W. C. Nash.
In the following calculations, every observation is reduced to the temperature 35°.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1862.	In English Measure. Apparent Value of A.	Apparent Value of A′.	Apparent Value of P.	Mean Value of P.	Log. $\frac{1}{2}$ A / Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. m X.	Value of X.	Value of m.	Value of X in French Measure.
January 29	+0·13940	0·08254	−0·00176		9·14526	4·744	0·30799	3·814	0·5329	1·759
30	+0·13940	0·08254	−0·00176		9·14525	4·749	0·30712	3·810	0·5323	1·757
February 1	+0·13937	0·08264	−0·00511		9·14545	4·753	0·30654	3·807	0·5321	1·755
March 31	+0·13887	0·08240	−0·00690		9·14405	4·707	0·31542	3·852	0·5367	1·776
April 25	+0·13859	0·08213	−0·00372		9·14289	4·724	0·31239	3·844	0·5341	1·772
May 28	+0·13798	0·08181	−0·00516	−0·00241	9·14110	4·770	0·30426	3·816	0·5281	1·759
June 3	+0·13812	0·08180	−0·00213		9·14127	4·776	0·30341	3·811	0·5276	1·757
12	+0·13740	0·08125	+0·00143		9·13869	4·783	0·30148	3·814	0·5249	1·759
25	+0·13735	0·08130	−0·00071		9·13873	4·787	0·30096	3·812	0·5246	1·758
July 3	+0·13754	0·08139	−0·00036		9·13928	4·783	0·30170	3·812	0·5254	1·758
August 15	+0·13691	0·08102	−0·00036		9·13729	4·805	0·29813	3·806	0·5221	1·755
December 24	+0·13562	0·08003	+0·00666		9·12911	4·813	0·29611	3·833	0·5160	1·767

This instrument was in the hands of its maker from August 20 to December 5.
The mean value of P used in the reductions of December 24, is +0·00752, obtained from the observations made between 1862, December 24, and 1863, February 3.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1862.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Jan. 1	..	30·245	37·8	30·4	33·3	29·4	38·5	29·0	39·6	36·4	3·9	5·4	0·2	− 3·2	NNE	Calm	0·0	0·0	0·0	40	91	0·01
2	..	30·249	41·4	34·2	37·1	33·4	69·0	28·8	38·6	36·4	3·7	8·7	1·0	+ 0·7	NE	NNE	0·0	0·0	0·0	55	125	0·00
3	..	29·857	40·5	32·5	35·4	33·9	49·0	29·0	38·6	36·4	1·5	2·6	0·0	− 1·0	WSW	W	0·0	0·0	0·0	120	258	0·01
4	..	29·702	41·8	32·3	36·5	30·4	47·0	28·5	40·6	37·4	6·1	8·5	3·8	+ 0·2	NW; N	NW; W	3·0	0·0	0·3	125	280	0·00
5	In Equator	29·659	45·0	32·5	39·0	34·2	55·0	27·0	45·6	36·4	4·8	6·5	1·5	+ 2·9	W; NW	N	2·0	0·0	0·0	100	215	0·03
6	..	29·967	37·3	29·5	33·0	26·8	41·0	22·0	39·6	36·9	6·2	9·4	5·4	− 3·0	W	NW; SW	0·0	0·0	0·0	65	133	0·00
7	First Qr.	29·912	43·8	31·3	38·9	36·8	56·0	23·0	38·6	36·4	2·1	4·2	1·4	+ 3·1	SW	SW	2·0	0·0	0·0	155	293	0·00
8	..	29·562	50·8	37·3	44·1	41·9	61·0	33·0	38·6	36·4	2·2	5·0	1·5	+ 8·6	SW	SW	4·0	0·0	1·0	195	391	0·14
9	..	29·540	53·5	45·7	49·7	47·9	54·0	32·0	39·6	37·4	1·8	2·4	1·3	+14·3	SW	SW	7·0	0·5	1·8	255	497	0·21
10	Apogee	29·630	51·0	43·5	47·8	43·5	57·0	39·0	41·5	37·9	4·3	5·9	2·3	+12·1	SW	SW	3·0	0·0	1·0	185	382	0·07
11	..	29·309	52·1	43·5	47·7	41·2	58·0	43·1	43·6	39·4	6·5	8·6	5·4	+12·1	SW	SW; W	12·0	0·5	3·0	255	572	0·03
12	..	29·515	48·0	36·9	43·6	42·3	57·5	32·0	43·6	40·4	1·3	3·4	0·0	+ 8·0	W	SW; NW	3·0	0·0	0·2	100	221	0·03
13	Greatest Declination N.	29·581	45·0	34·3	39·2	36·1	56·5	28·0	44·1	40·9	3·1	6·4	0·5	+ 3·6	NW	W; SW	0·0	0·0	0·0	65	116	0·00
14	..	29·497	43·8	36·7	40·2	38·6	48·0	32·7	43·6	40·4	1·6	4·8	0·2	+ 4·6	SW	NE	0·0	0·0	0·0	40	91	0·16
15	..	29·843	39·8	32·3	35·9	30·5	48·0	30·0	43·6	41·9	5·4	7·0	1·2	+ 0·4	NE	NE; E	0·0	0·0	0·0	20	72	0·00
16	Full	29·935	39·0	26·0	32·1	26·6	69·0	21·0	43·6	41·4	5·5	9·7	2·6	− 3·4	E	S; SE	0·0	0·0	0·0	50	89	0·00
17	..	29·925	31·3	23·3	27·0	17·8	61·4	18·0	42·6	40·4	9·2	11·0	9·0	− 8·9	SE	SE	0·0	0·0	0·0	65	113	0·00
18	..	29·936	32·0	22·0	26·8	10·6	75·0	17·0	40·6	38·4	16·2	21·0	13·0	− 9·5	SE	SE	0·0	0·0	0·0	60	121	0·00
19	..	29·735	28·4	20·4	25·3	17·7	39·5	13·4	39·6	36·4	7·6	8·9	6·7	−11·2	SE	Calm	0·0	0·0	0·0	15	31	0·00
20	In Equator	29·510	30·8	26·7	28·0	20·5	36·0	26·0	39·6	36·9	7·5	9·9	4·0	− 8·8	Calm	SE	2·0	0·0	0·1	95	206	0·00
21	..	29·383	33·1	28·0	30·5	27·4	38·0	25·0	38·6	36·4	3·1	4·6	2·1	− 6·6	ESE	Calm	1·5	0·0	0·0	65	146	0·07
22	..	29·358	48·3	31·5	40·9	39·0	80·0	27·0	38·6	36·4	1·9	5·5	0·7	+ 3·6	SE; SW	SW	3·0	0·0	0·2	130	246	0·03
23	Last Qr.	29·424	43·0	35·5	39·6	37·8	57·0	31·7	39·6	37·4	1·8	3·7	0·9	+ 2·1	S	SE	3·0	0·0	0·3	180	347	0·11
24	..	29·350	52·3	41·5	48·0	41·6	82·0	32·7	41·1	37·9	6·4	9·2	4·4	+10·2	SW	SW	6·0	0·0	3·0	225	455	0·00
25	..	29·627	46·0	35·3	40·7	40·1	49·0	31·0	39·6	37·4	0·6	2·3	0·0	+ 2·7	SW	N; W	1·5	0·0	0·0	85	178	0·41
26	Perigee; greatest Incl. N.	30·132	46·0	31·5	38·1	32·6	81·2	25·0	39·6	37·4	5·5	9·7	1·8	− 0·2	WSW	SW	0·0	0·0	0·0	95	165	0·00
27	..	30·033	46·3	35·3	40·6	34·3	71·0	28·6	39·6	37·4	6·1	10·3	1·5	+ 2·3	SSW	S; SE	2·0	0·0	0·1	125	225	0·00
28	..	29·679	51·3	34·3	42·7	40·0	74·0	28·0	39·6	38·4	2·7	5·5	1·0	+ 4·6	S	SW	3·0	0·0	0·2	190	370	0·02
29	..	29·582	53·0	43·1	48·5	46·3	61·0	36·0	41·6	..	2·2	6·4	1·1	+10·6	SW	WSW	6·0	0·0	1·5	255	514	0·03
30	New	29·353	52·0	45·3	48·0	45·4	53·0	41·5	42·6	..	2·6	5·0	0·0	+10·4	W	W	4·0	0·0	0·8	195	398	0·41
31	..	29·628	55·0	47·7	52·1	46·6	65·0	40·6	42·6	..	5·5	7·6	4·6	+14·8	WNW	W	8·0	0·5	2·0	280	564	0·02
Means	..	29·705	43·9	34·3	39·0	34·6	57·7	29·0	40·9	38·0	4·4	7·0	2·6	+ 2·4	...	...	..	..	..	Sum 3885	Sum 7925	Sum 1·79

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·284 on the 2nd; the first minimum in the month was 29in·618 on the 5th.
The second maximum ,, was 30in·025 on the 6th; the second minimum ,, was 29in·509 on the 8th.
The third maximum ,, was 29in·691 on the 8th; the third minimum ,, was 29in·512 on the 9th.
The fourth maximum ,, was 29in·678 on the 10th; the absolute minimum ,, was 29in·198 on the 11th.
The fifth maximum ,, was 29in·599 on the 12th; the fifth minimum ,, was 29in·446 on the 12th.
The sixth maximum ,, was 29in·611 on the 13th; the sixth minimum ,, was 29in·403 on the 14th.
The seventh maximum ,, was 29in·991 on the 18th; the seventh minimum ,, was 29in·289 on the 22nd.
The eighth maximum ,, was 29in·524 on the 23rd; the eighth minimum ,, was 29in·283 on the 23rd.
The ninth maximum ,, was 30in·155 on the 26th; the ninth minimum ,, was 29in·531 on the 30th.
The range in the month was 1in·086.
The mean for the month was 29in·705, being 0in·064 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 55°·0 on the 31st; the lowest was 20°·4 on the 19th; and the range in the month was 34°·6.
The mean ,, of all the highest daily readings was 43°·9, being 0°·8 *higher* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 34°·3, being 0°·9 *higher* than the average of the preceding 21 years.
The mean daily range was 9°·6, being 0°·1 *less* than the average of the preceding 21 years.
The mean for the month was 39°·0, being 0°·9 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Jan. 1	w	w	10, gt.-glm	10 : f, r
2	o	o : w	10	7, li.-cl
3	o	o	10, th.-r	10, th.-r : 7, f
4	o	o	o	10, li.-cl : o, h
5	o	o	10, ci.-s, ci, h	10, r : 7
6	s	o	10	10, li.-cl, h : 10, f
7	o	m	10, r	10 : 7, li.-cl
8	o	o	10, h.-r	7 : o : 10, s, ci.-s
9	o	o	10, r	10, r
10	m	m : s, sps	10, r : o : 2, ci.-cu, ci	10 : 10, oc.-r
11	o	o	10, h.-r : 10, s, ci.-cu, sc	10, oc.-r : o
12	o	o	10	10 : 10 oc.-r
13	o	o	10, h	10, h, li.-cl
14	o	o	10, h.-r	10, oc.-r
15	o	o : s, sps	10, li.-cl, h : 10	10
16	s	s	10, li.-cl	2, ci.-cu, ci.-s, ci : o, h.-f
17	w	w	10, h.-f	1, ci : 1, h.-f
18	o	w	9, ci.-cu, ci, h.-f : o	o : 3, ci.-cu, ci
19	o	o	10, h.-f	7 : 10
20	o	m	10	10, cu.-s, ci.-s : 10
21	o	w	10, sn	10, oc.-sn
22	o	v	10, r : 7, li.-cl	o, h
23	o	o	o, h.-f : 10	10, li.-cl : 10, r
24	o	o	10, r : 7, li.-cl	7, ci.-s, sc : o
25	o	o	10, h.-r	10, r : o, h
26	o	o : w	o, h.-f	o : 10
27	o	o	10, li.-cl	7, li.-cl : o, h
28	o	o : w	10	10, r : 1, ci : 10, oc.-r
29	o	o	10, li.-cl	10, oc.-r
30	o	w, N : o	10, li.-cl	10, r : h.-r
31	o	o	10	10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 50°·3 on the 9th; and the lowest was 9°·1 on the 18th.
The mean ,, was 34°·6, being 0°·6 *lower* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·200, being 0^{in}·003 *less* than the average of the preceding 21 years.
Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·3, being 0^{gr}·1 *less* than the average of the preceding 21 years.
Degree of Humidity.—The mean for the month was 85 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 21 years.
Weight of a Cubic Foot of Air.—The mean for the month was 552 grains, being 2 grains *less* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·8.

WIND.

The proportions were of N. 3, S. 11, W. 11, and E. 6. The greatest pressure in the month was 12^{lbs}·0 on the square foot on the 11th.

RAIN.

Fell on 17 days in the month, amounting to 1^{in}·8, as measured in the simple cylinder gauge partly sunk below the ground; being the *same* as the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day. Wheewell's	Amount of Horizontal Movement of the Air on each Day. Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	miles	in.
Feb. 1	In Equator	29·798	53·0	48·5	50·9	45·9	59·0	48·0	46·6	..	5·0	6·4	3·7	+13·7	WNW	W	6·0	0·0	1·8	190	366	0·05
2	..	29·977	52·5	46·8	49·0	43·3	65·0	42·4	47·6	..	5·7	6·8	2·9	+12·0	SW	SW	2·5	0·0	0·3	180	361	0·00
3	..	30·031	54·0	46·7	50·3	46·7	72·0	41·5	48·1	47·4	3·6	6·4	1·3	+13·0	SW	SW	2·0	0·0	0·0	165	313	0·00
4	..	30·056	55·5	47·1	51·2	48·2	62·0	42·5	50·6	47·4	3·0	5·4	2·3	+13·5	WSW	WSW	3·0	0·0	1·0	210	398	0·00
5	..	29·881	55·0	44·0	49·0	44·2	79·0	40·7	49·6	46·4	4·8	8·4	1·7	+10·6	WSW	W	6·0	0·0	1·5	165	305	0·00
6	First Qr.	29·827	49·5	36·7	42·4	39·2	60·0	31·7	48·6	46·4	3·2	6·5	1·3	+ 3·4	W	Calm	0·0	0·0	0·0	85	155	0·00
7	Apogee	30·090	39·0	28·0	32·4	25·0	79·0	24·0	46·6	44·4	7·4	10·3	3·2	− 6·8	SE	NE	2·0	0·0	0·3	70	185	0·00
8	..	30·466	34·4	24·4	28·1	16·0	63·0	17·6	46·6	44·4	12·1	14·6	9·2	−11·1	NE	NE	1·0	0·0	0·0	40	122	0·00
9	Greatest Declination N	30·425	39·7	25·7	32·3	27·2	43·5	17·0	45·6	43·4	5·1	9·4	1·2	− 6·7	NW	N	1·0	0·0	0·0	115	174	0·00
10	..	30·318	43·0	28·0	34·4	28·3	79·0	21·0	45·6	43·4	6·1	14·1	2·5	− 4·3	N	N ; W	0·0	0·0	0·0	65	140	0·00
11	..	30·079	41·7	26·5	34·6	33·5	43·0	19·0	42·6	39·4	1·1	4·8	0·0	− 3·9	WSW	NW	0·0	0·0	0·0	50	88	0·00
12	..	29·893	44·5	37·3	40·3	37·8	45·0	36·0	43·6	41·4	2·5	4·6	0·7	+ 2·0	NW	W	0·0	0·0	0·0	70	134	0·04
13	..	29·938	39·2	35·2	36·6	32·5	52·0	32·0	43·1	41·4	4·1	6·8	1·8	− 1·6	NE	Calm	0·0	0·0	0·0	30	49	0·00
14	Full	29·954	40·4	34·5	36·8	33·0	47·5	33·5	42·6	40·4	3·8	7·1	2·6	− 1·2	NE	ENE	0·0	0·0	0·0	10	20	0·00
15	..	29·985	43·7	34·5	38·5	32·2	64·0	30·8	39·6	36·4	6·3	10·1	0·8	+ 0·4	Calm	SE	0·0	0·0	0·0	65	..	0·00
16	In Equator	29·729	43·5	32·3	36·8	31·5	79·0	27·5	41·6	39·4	5·3	11·2	0·6	− 1·3	SE	ESE	1·0	0·0	0·0	105	..	0·00
17	..	29·313	44·8	32·7	39·1	39·1	48·0	28·0	41·6	39·4	0·0	0·5	0·0	+ 0·9	ESE	Calm ; SW	0·0	0·0	0·0	35	..	0·18
18	..	29·260	56·0	40·2	47·4	44·9	92·0	40·0	41·6	39·4	2·5	7·6	1·1	+ 9·1	SE	SSW	3·0	0·0	0·1	145	..	0·02
19	Perigee	29·399	55·5	44·0	49·6	45·3	67·7	39·0	41·6	39·4	4·3	9·4	1·3	+11·2	S	S	3·5	0·0	0·5	175	..	0·15
20	..	29·502	56·3	44·2	50·0	43·8	86·0	42·5	42·6	40·4	6·2	11·0	1·8	+11·5	S ; SW	SW	6·0	0·0	0·4	145	..	0·00
21	Last Qr.	29·718	56·2	37·8	47·5	42·0	101·0	30·3	42·6	40·4	5·5	11·2	0·0	+ 9·0	S	SE	3·0	0·0	0·3	120	..	0·00
22	Greatest Declination S.	29·627	56·0	40·7	47·4	44·6	88·0	38·5	44·6	42·4	2·8	6·0	1·1	+ 8·8	SE	SE	0·0	0·0	0·0	35	..	0·00
23	..	29·986	52·5	38·5	45·2	44·8	60·3	36·0	45·6	42·4	0·4	3·2	0·0	+ 6·3	SE	Calm	0·0	0·0	0·0	40	..	0·00
24	..	29·959	40·2	37·8	38·3	35·0	59·0	36·0	45·6	43·4	3·3	3·8	0·7	− 0·8	SE	SE	4·0	0·0	0·8	165	..	0·02
25	..	30·018	41·8	36·2	38·1	32·3	47·0	36·0	45·6	43·4	5·8	9·7	1·0	− 1·4	SE	E	4·0	0·0	1·3	145	273	0·00
26	..	30·185	35·8	32·5	33·6	29·0	47·5	32·0	45·6	43·4	4·6	8·0	2·4	− 6·1	E	NE	3·0	0·0	1·0	125	328	0·00
27	..	30·051	36·9	32·5	34·2	29·2	44·0	31·2	43·6	41·4	5·0	7·9	1·6	− 5·6	E	E	4·0	0·0	1·3	135	365	0·00
28	New	29·883	40·6	33·2	35·9	30·7	47·0	31·7	42·6	40·4	5·2	8·5	1·3	− 4·1	E	E	3·0	0·0	0·8	125	336	0·00
Means	..	29·905	46·5	36·7	41·1	36·6	63·6	33·1	44·7	42·2	4·5	7·8	1·7	+ 2·5	...	...	..	..	..	Sum 3005	Sum 18 days 4112	Sum 0·46

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·081 on the 3rd ; the first minimum in the month was 29in·820 on the 6th.
The absolute maximum ,, was 30in·495 on the 8th ; the second minimum ,, was 29in·883 on the 12th.
The third maximum ,, was 30in·011 on the 15th ; the absolute minimum ,, was 29in·201 on the 18th.
The fourth maximum ,, was 29in·816 on the 21st ; the fourth minimum ,, was 29in·565 on the 22nd.
The fifth maximum ,, was 30in·053 on the 23rd ; the fifth minimum ,, was 29in·898 on the 24th.
The sixth maximum ,, was 30in·205 on the 26th.
The range in the month was 1in·294.
The mean for the month was 29in·905, being 0in·122 *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 56°·3 on the 20th; the lowest was 24°·4 on the 8th; and the range in the month was 31°·9.
The mean ,, of all the highest daily readings was 46°·5, being 1°·7 *higher* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 36°·7, being 3°·3 *higher* than the average of the preceding 21 years.
The mean daily range was 9°·8, being 1°·6 *less* than the average of the preceding 21 years.
The mean for the month was 41°·1, being 2°·5 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Feb. 1	0	0	10, th.-r	10
2	0	0	10	10, cu.-s, ci.-s : 0
3	0	0	10	10
4	0	0	10	10
5			10, li.-cl	10, ci, ci.-cu, ci.-s
6			10, ci, ci-cu, cu.-s, ci.-s	10, li.-cl : 7, lu.-ha
7			5, ci, ci.-cu, ci.-s	5 : 10
8			0, h.-f	8, li.-cl, sn : cu.-s, ci.-s
9			10, oc.-sn	10
10			10, li.-cl, h	2, ci.-cu, ci : 0, f
11			10, h, h.-f	10, h, h.-f : 10, f
12			10, oc.-r	10, f : 9, cu.-s, ci.-s
13			10	10 : m.-r : f
14			10	10
15			10	7 : 10
16			7, li.-cl	8, ci.-s, ci : 5, ci.-s
17			10, r	10, h.-r : th.-f
18			10, cu.-s, ci.-s	10, m.-r : 9, ci.-cu, cu.-s : 0
19			10, cu.-s, ci.-s	10, ci.-s, oc.-r
20			7, ci.-cu, ci.-s	7, li.-cl : 0
21			7, ci.-s, f	0
22			3, ci.-cu, ci.-s	5, li.-cl : 10
23	0	0	10, m.-r, f	10 : 3 : 10, th.-f
24	0	w	10, r	10, th.-r
25	0	0 : w	10	10 : 10, oc.-r
26	0	0 : w	10	10
27	0	0	10	10 : 9, ci.-s
28	0	m	10	10 : 10, oc.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 50°·3 on the 4th; and the lowest was 12°·4 on the 8th.

The mean ,, was 36°·6, being 2°·0 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·217 being 0^{in}·014 *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·5, being 0^{gr}·1 *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 84 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 21 years

Weight of a Cubic Foot of Air.—The mean for the month was 553 grains, being the *same* as the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 8·5.

WIND.

The proportions were of N. 5, S. 6, W. 8, and E. 9. The greatest pressure in the month was 6^{lbs}·0 on the square foot on the 1st, 5th, and 20th.

RAIN.

Fell on 6 days in the month, amounting to 0^{in}·5, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·1 *less* than the average fall of the preceding 47 years.

ELECTRICITY.—From February 5 to 22, the apparatus was under repair.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Whewell's / Robinson's. Amount of Horizontal Movement of the Air on each Day. Whewell's	Robinson's	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°				lbs.	lbs.	lbs.	miles.	miles.	in.
Mar. 1	In Equator	29·806	44·0	32·2	36·6	29·3	66·0	29·0	42·6	39·4	7·3	11·3	3·8	— 3·5	E	E		3·0	0·0	0·5	70	195	0·00
2	..	29·354	38·0	27·0	31·1	22·3	46·0	25·0	41·6	39·4	8·8	14·2	7·0	— 8·9	SE; NE	NNE		0·0	0·0	0·0	55	153	0·00
3	..	29·134	38·3	25·3	30·8	25·8	46·0	20·6	40·6	38·4	5·0	8·9	1·5	— 9·1	WSW	N		0·0	0·0	0·0	50	149	0·00
4	..	29·555	40·6	22·5	29·9	20·5	68·0	14·0	39·6	37·4	9·4	14·6	6·4	—10·0	NW	SW		0·0	0·0	0·0	70	169	0·00
5	..	29·654	45·0	25·5	35·5	26·2	78·0	18·0	39·6	37·4	9·3	18·7	0·9	— 4·5	SW	SW		10·0	0·0	2·0	More than 232	579	0·13
6	..	29·386	55·0	39·0	48·3	46·1	64·0	32·0	39·6	37·4	2·2	4·4	1·0	+ 8·2	WSW	SW		8·0	1·0	2·5	275	569	0·03
7	Apogee	29·323	57·2	46·8	51·9	46·2	79·0	46·0	41·6	37·4	5·7	9·7	2·1	+11·8	SW	SW		8·0	0·5	1·8	200	479	0·05
8	First Quarter; Greatest Dec. N.	29·420	60·5	47·8	53·3	47·8	99·0	43·6	44·6	42·4	5·5	8·7	1·9	+13·2	SW	SSE; SW		4·0	0·0	0·5	175	345	0·05
9	..	29·374	52·8	44·7	47·2	42·6	61·6	40·5	45·6	42·4	4·6	10·4	0·7	+ 7·0	SW	SW		8·0	0·0	2·0	205	420	0·21
10	..	29·825	53·0	42·0	46·4	42·1	63·4	33·0	44·6	40·4	4·3	8·6	2·9	+ 6·1	SW	SW		2·0	0·0	0·0	90	200	0·02
11	..	29·641	51·0	41·0	46·1	46·1	56·0	32·0	45·6	43·4	0·0	1·7	0·0	+ 5·6	SW	SW		3·0	0·0	0·3	115	230	0·15
12	..	29·561	53·8	41·4	46·5	43·1	72·0	40·5	47·6	45·4	3·4	8·8	0·9	+ 5·9	SW	W; SW		0·0	0·0	0·0	40	115	0·01
13	..	29·842	51·3	38·7	44·9	44·7	60·2	30·5	48·6	46·4	0·2	2·8	0·0	+ 3·9	Calm	NE		2·0	0·0	0·0	105	250	0·07
14	..	30·009	46·0	39·8	41·8	40·2	56·0	34·6	48·6	46·4	1·6	5·0	0·7	+ 0·5	ENE	ENE		0·0	0·0	0·0	85	240	0·05
15	In Equator	29·964	47·8	38·5	41·5	39·0	63·0	36·5	48·6	46·4	2·5	7·6	0·2	0·0	ENE	ENE		2·0	0·0	0·0	80	225	0·00
16	Full	29·767	45·9	40·0	41·5	41·0	51·5	39·8	45·6	43·4	0·5	0·9	0·0	— 0·2	NE	NE		0·0	0·0	0·0	45	136	0·01
17	..	29·639	46·8	38·9	41·7	40·0	54·0	37·0	47·6	45·4	1·7	2·9	0·4	— 0·1	NE	SW		0·0	0·0	0·0	100	215	0·72
18	Perigee	29·598	49·1	37·3	41·8	40·8	61·0	36·0	47·6	45·4	1·0	2·9	0·7	0·0	SW	NW		0·0	0·0	0·0	20	86	0·13
19	..	29·448	51·4	33·5	41·1	37·0	102·0	27·5	47·6	45·4	4·1	10·1	2·0	— 0·7	NE	NE; E		0·0	0·0	0·0	100	253	0·00
20	..	29·212	39·5	33·9	36·1	35·0	57·0	33·0	47·6	45·4	1·1	1·7	0·5	— 5·8	NE	NE		7·0	0·0	1·8	165	391	0·41
21	Greatest Declination S.	29·384	37·6	32·3	34·7	32·0	48·0	28·3	46·6	44·4	2·7	4·1	1·4	— 7·2	NE	NE		4·0	0·0	1·0	145	352	0·60
22	Last Qr.	29·863	44·0	33·5	37·7	30·4	79·0	32·0	47·6	45·4	7·3	11·9	4·1	— 4·2	NE	SE		0·0	0·0	0·0	75	181	0·00
23	..	29·551	50·0	34·9	39·9	39·9	51·0	31·8	46·6	44·4	0·0	0·4	0·0	— 2·1	SE	SE; SW		3·0	0·0	0·2	155	300	0·52
24	..	29·378	63·6	46·1	53·3	48·4	108·0	41·6	46·6	44·4	4·9	12·4	2·6	+11·2	SW	S; SW		1·5	0·0	0·0	60	135	0·00
25	..	29·318	62·5	49·3	53·8	50·4	85·0	42·5	46·6	44·4	3·4	9·3	2·3	+11·6	SW	SE; SW		0·0	0·0	0·0	40	111	0·09
26	..	29·343	55·0	44·3	48·1	47·3	83·0	39·8	47·6	45·4	0·8	3·0	0·0	+ 5·8	W; E	ESE		0·0	0·0	0·0	30	90	0·07
27	..	29·226	62·6	43·3	50·7	49·0	108·0	40·8	47·6	45·4	1·7	6·7	0·0	+ 8·3	E	SE		0·0	0·0	0·0	35	105	0·05
28	In Equator	29·052	49·5	44·3	45·9	44·5	56·0	40·6	48·6	46·4	1·4	2·9	0·0	+ 3·3	Calm	NE		0·0	0·0	0·0	50	125	0·11
29	..	29·119	49·0	40·7	43·5	40·4	58·0	40·0	50·6	48·4	3·1	7·1	0·7	+ 0·7	NE	NW; S		0·0	0·0	0·0	35	98	0·00
30	New	29·221	52·5	42·2	46·1	43·7	62·0	37·5	51·6	..	2·4	5·5	1·1	+ 3·1	SW	SW		0·0	0·0	0·0	50	195	0·00
31	..	29·461	58·0	43·2	48·8	44·1	83·0	40·2	50·6	..	4·7	13·7	1·5	+ 5·4	WSW	SW		0·0	0·0	0·0	120	243	0·07
Means	..	29·498	50·0	38·4	43·1	39·5	68·5	34·3	46·0	43·2	3·6	7·5	1·5	+ 1·8	...	...		..	..	..	Sum 3072	Sum 7334	Sum 3·55

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first minimum in the month was 29in·105 on the 3rd.
The first maximum in the month was 29in·802 on the 5th; the second minimum ,, was 29in·284 on the 7th.
The second maximum ,, was 29in·542 on the 8th; the third minimum ,, was 29in·290 on the 8th.
The third maximum ,, was 29in·908 on the 10th; the fourth minimum ,, was 29in·538 on the 12th.
The absolute maximum ,, was 30in·023 on the 14th; the fifth minimum ,, was 29in·151 on the 20th.
The fifth maximum ,, was 29in·904 on the 22nd; the absolute minimum ,, was 29in·049 on the 28th.
The range in the month was 0in·974.
The mean for the month was 29in·498, being 0in·286 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 63°·6 on the 24th; the lowest was 22°·5 on the 4th; and the range in the month was 41°·1.
The mean ,, of all the highest daily readings was 50°·0, being 0°·1 *lower* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 38°·4, being 3°·1 *higher* than the average of the preceding 21 years.
The mean daily range was 11°·6, being 3°·2 *less* than the average of the preceding 21 years.
The mean for the month was 43°·1, being 1°·3 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
March 1	o	o	10, li.-cl	10, li.-cl : 7
2	o	o	10	10, cu.-s, ci.-s : o, f
3	w	o	7, li.-cl	10, sn, h : o, th.-f
4	o		10, li.-cl, h	7, li.-cl. : o, f
5			7, li.-cl	10, li.-cl : 10, h.-sqs.-w.-r
6			10	10, oc.-r
7			10, r	10, li.-cl : 7, ci.-s, sc
8			10 : 7, li.-cl	7, li.-cl : 10, l, oc.-r : o
9	o	o	10, oc.-shs.-r	10, r : 7
10	o	o : w	10	10, gt.-glm : 10, ci.-cu : 7, cu.-s, ci.-s
11	o	o	10, h.-r	10, oc.-r : 10, s, ci.-s
12	o	s	10, fr.-shs.-r	10, fr.-shs.-r : 7, ci.-cu, ci.-s
13	v	v	10, h.-r : 10	10 : 10, oc.-r
14	o	w	10	10
15	w	o : w	10, m.-r	10
16	o	w	10, m.-r	10 : 10, r
17	o	s, N : w	10, c.-r	10, oc.-r : 10, h.-r
18	o	s	10, h.-r	10 : o, f
19	s, N	w	10	7, li.-cl : 10
20			10, r	10, r : 10, h.-r, sn
21			10, sn, r	10, sn, r : 10, th.-r : 10
22			10	10, ci.-s : o
23			10, h.-r	10, h.-r : o, h
24			8, li.-cl	8, ci.-cu, ci.-s, ci : sl.-r
25			10, r	10, ci.-s, r : o
26			10, f	10, r : 10 : f
27			10, th.-r	4, ci.-cu, ci : 10, h.-r
28			10, r : 10, gt.-glm	10, h
29			10	10 : 7, li.-cl, h
30			10	10, m.-r
31			10, li.-cl	7 li.-cl : 10, h.-shs.-r o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·8 on the 25th and 27th; and the lowest was 15°·8 on the 4th.

The mean ,, was 39°·5, being 2°·9 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot242$, being $0^{in}\cdot024$ *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{gr}\cdot8$, being $0^{gr}\cdot3$ *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 86 (that of Saturation being represented by 100), being 4 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 544 grains, being 6 grains *less* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 8·9.

WIND.

The proportions were of N. 6, S. 8, W. 9, and E. 8. The greatest pressure in the month was $10^{lbs}\cdot0$ on the square foot on the 5th.

RAIN.

Fell on 21 days in the month, amounting to $3^{in}\cdot5$, as measured in the simple cylinder gauge partly sunk below the ground; being $2^{in}\cdot0$ *greater* than the average fall of the preceding 47 years.

ELECTRICITY.—From March 5 to 8. The insulating lamp was not burning; from March 20 to May 12, the Electrometer was not in action.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whewell's. Amount of Horizontal Movement of the Air on each Day.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
April 1	..	29·723	53·5	41·0	48·1	45·0	75·0	36·0	51·6	..	3·1	7·8	0·9	+ 4·5	SW	SW	4·0	0·0	0·5	240	486	0·00
2	..	29·498	55·0	49·5	51·9	50·5	65·0	45·5	51·6	..	1·4	2·8	0·6	+ 7·8	SW	SW	8·0	0·5	2·5	190	389	0·27
3	Apogee.	29·534	63·7	45·0	50·3	44·8	107·0	40·0	52·6	50·4	5·5	10·6	0·0	+ 5·8	SW ; NW	SW	2·0	0·0	0·1	95	192	0·05
4	..	29·931	52·0	42·0	46·0	43·9	62·0	35·0	52·6	50·4	2·1	4·6	1·1	+ 1·2	SW ; NW	NNE ; SW	0·0	0·0	0·0	45	125	0·00
5	Greatest Declination N.	29·871	56·5	42·7	48·9	44·8	92·0	40·0	53·6	51·4	4·1	11·6	1·5	+ 3·8	SW	WSW	4·5	0·0	0·7	215	459	0·00
6	..	29·826	56·5	47·8	50·6	48·5	60·3	45·5	53·6	51·4	2·1	3·8	1·4	+ 5·2	WSW	WSW	3·0	0·0	0·5	130	257	0·00
7	First Qr.	30·027	52·2	45·5	47·4	46·2	68·0	43·5	53·6	51·4	1·2	3·6	0·0	+ 1·9	WSW ; NE	NE	0·0	0·0	0·0	90	205	0·30
8	..	30·085	46·3	42·2	43·2	41·7	50·2	42·0	53·6	51·4	1·5	3·6	0·4	— 2·3	NE	NE	0·0	0·0	0·0	120	244	0·01
9	..	29·888	47·8	39·8	43·2	42·6	50·6	37·5	52·6	50·4	0·6	3·2	0·0	— 2·2	NE	NE	0·0	0·0	0·0	65	161	1·10
10	..	29·808	55·5	41·7	45·9	44·4	66·0	39·5	51·6	49·4	1·5	4·8	0·2	+ 0·8	NE	NE	0·0	0·0	0·0	70	169	0·41
11	..	30·015	45·0	37·1	39·6	34·3	54·0	35·0	50·6	48·4	5·3	7·9	4·2	— 5·4	NE	NE	3·0	0·0	0·4	160	380	0·01
12	In Equator	30·100	46·0	30·4	36·6	27·2	94·0	27·2	47·6	45·4	9·4	17·2	8·9	— 8·3	NE	NNE	0·5	0·0	0·0	75	203	0·00
13	..	30·043	47·4	26·7	35·8	27·6	105·0	21·0	47·6	45·4	8·2	18·5	..	— 9·4	N	NE	3·0	0·0	0·2	110	261	0·00
14	Full.	29·938	47·0	28·9	37·8	31·0	80·0	20·5	45·6	43·4	6·8	13·0	3·7	— 7·7	W; NE	NW ; SW	0·0	0·0	0·0	55	168	0·00
15	Perigee.	29·981	51·2	33·0	39·2	33·6	86·0	25·0	45·6	43·4	5·6	14·5	1·6	— 6·5	NE	NE ; SE	0·0	0·0	0·0	50	135	0·00
16	..	29·919	53·0	28·0	41·7	36·6	97·0	20·5	45·6	43·4	5·1	14·2	4·8	— 4·3	SW	SW	2·5	0·0	0·6	215	437	0·00
17	..	29·722	58·5	43·4	48·6	37·2	104·0	37·5	45·6	43·4	11·4	16·9	4·2	+ 2·4	SW ; NW	W	2·0	0·0	0·1	155	330	0·05
18	Greatest Declination S.	29·727	57·0	40·9	48·8	42·3	87·0	35·0	46·6	44·4	6·5	13·2	..	+ 2·4	W	SW	1·0	0·0	0·0	180	391	0·00
19	..	29·696	58·6	48·3	52·3	44·5	85·0	48·0	46·6	45·4	7·8	11·2	5·4	+ 5·8	SW	SW	6·0	0·0	1·0	230	481	0·00
20	..	29·860	62·8	49·6	53·3	48·5	96·6	47·0	48·6	46·4	4·8	11·8	2·8	+ 6·6	SW	SW	1·0	0·0	0·0	110	265	0·02
21	Last Qr.	29·830	62·5	43·1	52·6	46·5	112·0	39·5	50·6	48·4	6·1	13·4	4·6	+ 5·6	SW	SW	0·0	0·0	0·0	155	300	0·00
22	..	29·490	60·5	46·0	51·7	47·9	105·0	40·0	51·6	49·4	3·8	11·2	2·5	+ 4·4	SW	SW	4·0	0·0	1·0	180	525	0·11
23	..	29·622	61·5	46·3	50·7	42·8	108·8	40·8	52·6	50·4	7·9	16·5	3·2	+ 3·1	SSW	W ; SW	7·0	0·0	1·2	190	390	0·03
24	In Equator.	29·831	64·2	44·0	54·0	44·8	110·5	38·8	53·6	51·4	9·2	19·8	5·8	+ 6·4	SW	SW	2·0	0·0	0·0	75	160	0·00
25	..	29·715	75·0	51·0	60·2	55·1	116·0	45·0	53·6	51·4	5·1	17·2	1·5	+12·6	SW	SW	0·0	0·0	0·0	55	110	0·09
26	..	29·758	67·5	51·0	56·8	53·2	99·0	45·0	55·6	53·4	3·6	8·6	1·7	+ 9·2	SE	W	2·0	0·0	0·1	100	232	0·39
27	..	29·936	66·5	42·9	53·8	45·3	110·5	37·5	56·6	54·4	8·5	14·7	4·0	+ 5·8	W	W ; SW	0·0	0·0	0·0	35	103	0·00
28	New.	30·023	68·0	40·7	54·2	45·0	107·0	33·8	55·6	53·4	9·2	22·0	3·5	+ 5·7	SW	NE ; SSW	0·0	0·0	0·0	10	64	0·00
29	..	30·113	65·5	40·5	53·6	46·2	114·8	36·5	58·6	56·4	7·4	16·9	4·8	+ 4·5	SE	SE	4·0	0·0	0·5	140	281	0·00
30	..	29·909	67·8	43·1	55·2	48·1	118·5	42·5	58·6	56·4	7·1	18·4	4·6	+ 5·7	SE	SE	2·0	0·0	0·2	80	195	0·00
Means	..	29·847	57·5	41·7	48·4	43·0	89·6	37·4	51·5	49·3	5·4	11·8	2·9	+ 2·2	...	...	..	..	..	Sum 3620	Sum 8098	Sum 2·84

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·747 on the 1st ; the first minimum in the month was 29in·440 on the 2nd.
The second maximum ,, was 29in·970 on the 4th ; the second minimum ,, was 29in·808 on the 6th.
The third maximum ,, was 30in·121 on the 8th ; the third minimum ,, was 29in·788 on the 10th.
The fourth maximum ,, was 30in·136 on the 12th ; the fourth minimum ,, was 29in·814 on the 14th.
The fifth maximum ,, was 30in·056 on the 15th ; the fifth minimum ,, was 29in·678 on the 19th.
The sixth maximum ,, was 29in·871 on the 20th ; the absolute minimum ,, was 29in·414 on the 22nd.
The seventh maximum ,, was 29in·896 on the 24th ; the seventh minimum ,, was 29in·698 on the 25th.
The absolute maximum ,, was 30in·148 on the 29th.
The range in the month was 0in·734.
The mean for the month was 29in·847, being 0in·100 *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 75°·0 on the 25th ; the lowest was 26°·7 on the 13th ; and the range in the month was 48°·3.
The mean ,, of all the highest daily readings was 57°·5, being 0°·8 *higher* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 41°·7, being 3°·2 *higher* than the average of the preceding 21 years.
The mean daily range was 15°·8, being 2°·4 *less* than the average of the preceding 21 years.
The mean for the month was 48°·4, being 2°·1 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
April 1			8, ci.-cu, ci.-s	10, oc.-shs.-r
2			10, th.-r	10, r : 10, th.-r
3			10, r	7, ci.-cu, ci.-s : 10, oc.-r : 1
4			10	10
5			10, li.-cl	10, oc.-r
6			10, oc.-r	10 : 10, th.-r
7			10, h.-r	10, r
8			10	10, r
9			10, h.-r	10 : 10, h.-r
10			10, r	10, oc.-r
11			10, oc.-r	10, ci.-s
12			1, ci	7, li.-cl : 0, f
13			7, cu, cu.-s, ci.-s	7, ci.-s : 0
14			0 : 10, s, ci.-s	10, ci.-cu, ci.-s
15			10, oc.-r	8, ci.-cu, ci.-s : ci.-cu, ci.-s, sn : 0
16			5, ci : 10, ci.-s	10, ci.-s
17			3, ci.-cu, ci.-s	3, li.-cl : 0
18			10, cu.-s, ci.-s	10
19			10, ci.-s	10
20			10, ci.-s, oc. r	10, ci.-s
21			5, li.-cl.	8, li.-cl : 0
22			7, li.-cl : 10, oc.-shs.-r	10, fr.-r : 0
23			7, ci.-s, sc	7, li.-cl : 0
24			10, ci.-s	9, cu.-s, ci.-s
25			10, fr.-shs.-r, t	10, li.-cl : 0
26			10, h.-shs. r	10, oc.-shs.-r : 2
27			3, h	3, h : 0
28			7, cu, ci.-cu, ci	7, cu, ci.-cu, ci : 3
29			0	0
30			0	0 : 5, s, li.-cl 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·2 on the 25th; and the lowest was 24°·5 on the 12th.

The mean ,, was 43°·0, being 3°·1 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·277, being 0^{in}·030 *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·1, being 0^{gr}·2, *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 81 (that of Saturation being represented by 100), being 2 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 545 grains, being 3 grains *greater* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·3.

WIND.

The proportions were of N. 5, S. 8, W. 12, and E. 5. The greatest pressure in the month was 8^{lbs}·0 on the square foot on the 2nd.

RAIN.

Fell on 13 days in the month, amounting to 2^{in}·8, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·0 *greater* than the average fall of the preceding 47 years.

ELECTRICITY.—The Electrometer was not in action throughout the month.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's / Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
May 1	Apogee	29·806	77·0	50·5	61·1	54·3	121·0	40·3	58·6	56·4	6·8	19·7	2·1	+11·1	SE	SW	1·0	0·0	0·0	120	249	0·11
2	Greatest Declination N.	30·048	64·0	47·0	52·4	46·6	117·0	45·7	58·6	56·4	5·8	10·8	2·7	+ 1·9	SW ; NW	NE ; E	0·0	0·0	0·0	70	199	0·00
3	..	29·926	51·6	37·8	44·7	43·3	66·5	30·6	58·6	56·4	1·4	8·8	0·0	— 6·2	SE	ESE	3·5	0·0	0·3	115	293	0·00
4	..	29·627	76·3	46·8	59·8	52·0	102·0	40·6	58·6	56·4	7·8	24·8	0·8	+ 8·5	SE	SW	2·0	0·0	0·0	35	118	0·02
5	..	29·834	76·8	53·4	62·7	54·7	128·0	45·0	58·6	56·4	8·0	19·0	4·6	+11·1	SW	SSW ; SE	0·0	0·0	0·0	40	119	0·01
6	..	29·877	81·5	52·3	65·4	55·6	132·0	46·8	59·6	57·4	9·8	23·9	0·6	+13·6	SE	SE	2·0	0·0	0·1	70	179	0·03
7	First Qr.	29·632	69·0	50·7	55·9	53·8	103·1	47·8	60·6	58·4	2·1	9·1	0·8	+ 4·0	NW ; E	SW	3·0	0·0	0·5	150	320	0·58
8	..	29·765	64·0	48·3	54·6	48·5	106·4	43·8	60·6	58·4	6·1	14·1	2·3	+ 2·8	SW	SW	2·5	0·0	0·2	105	234	0·03
9	In Equator	29·446	63·0	46·1	51·5	46·6	110·8	46·0	60·6	58·4	4·9	10·8	0·6	— 0·1	SW	SW	4·0	0·0	0·3	200	400	0·77
10	..	29·486	65·0	47·5	52·6	47·5	110·5	46·5	59·6	57·4	5·1	15·1	2·0	+ 1·2	WSW	SW	2·0	0·0	0·0	130	271	0·02
11	..	29·528	63·0	46·9	51·9	46·7	85·0	46·0	59·6	57·4	5·2	9·3	2·5	+ 0·6	NNW	W	2·0	0·0	0·1	50	152	0·09
12	..	29·494	59·0	44·9	51·4	46·1	81·5	42·0	59·6	57·4	5·3	9·7	2·0	+ 0·1	Calm	Calm	0·0	0·0	0·0	40	106	0·00
13	Full	29·755	62·3	43·1	50·5	44·9	106·0	37·4	59·6	57·4	5·6	10·3	1·3	— 0·9	ENE	NE	0·0	0·0	0·0	75	181	0·00
14	Perigee	29·755	56·0	47·9	50·0	44·8	74·6	32·5	58·6	56·4	5·2	10·8	3·4	— 1·8	NE	E ; NE	0·0	0·0	0·0	120	264	0·00
15	Greatest Declination S.	29·718	51·2	43·9	46·9	46·8	56·2	40·0	58·6	56·4	0·1	1·7	0·0	— 5·3	NE	NE	2·0	0·0	0·2	90	220	0·69
16	..	29·755	66·8	47·5	55·7	53·1	98·0	46·0	56·6	54·4	2·6	9·4	1·4	+ 3·1	NE	W	0·0	0·0	0·0	50	154	0·14
17	..	29·996	68·5	46·3	57·2	54·5	96·0	41·8	56·6	54·4	2·7	10·1	1·0	+ 4·4	W	W ; SE	0·0	0·0	0·0	10	55	0·00
18	..	29·974	69·6	47·0	58·5	54·6	92·0	43·0	57·6	55·4	3·9	13·0	0·8	+ 5·4	W	SE ; SW	0·0	0·0	0·0	20	66	0·00
19	..	29·880	75·4	46·8	60·6	54·5	118·5	44·0	57·6	55·4	6·1	16·9	0·8	+ 7·3	SW	SW	0·0	0·0	0·0	50	112	0·00
20	Last Qr.	29·580	69·0	49·6	58·0	50·2	108·5	44·0	59·6	57·4	7·8	13·0	4·0	+ 4·4	SW	SW	2·0	0·0	0·0	140	283	0·00
21	..	29·373	60·0	42·4	48·2	44·5	102·0	41·2	59·6	57·4	3·7	11·8	2·3	— 5·6	SW	SW	3·0	0·0	0·1	150	307	0·17
22	In Equator	29·639	63·6	39·1	51·0	44·5	103·2	34·0	59·6	57·4	6·5	17·1	1·4	— 3·1	W	W ; SW	4·0	0·0	0·3	185	388	0·02
23	..	29·634	65·5	48·7	55·1	52·8	89·0	45·6	59·6	57·4	2·3	14·0	1·4	+ 0·8	SW	SW	3·0	0·0	0·5	160	336	0·00
24	..	29·808	68·0	51·0	57·9	49·8	112·0	48·3	59·6	57·4	8·1	16·7	2·4	+ 3·5	SW ; NW	W	0·0	0·0	0·0	110	232	0·00
25	..	29·952	65·7	45·5	54·7	46·7	98·0	42·0	59·6	57·4	8·0	17·8	5·4	+ 0·1	W	NW	0·0	0·0	0·0	65	157	0·00
26	..	29·936	71·0	42·1	55·6	48·3	121·3	36·3	59·6	57·4	7·3	16·4	1·4	+ 0·9	NW	WSW	1·0	0·0	0·0	145	296	0·00
27	..	29·740	63·0	51·7	56·1	53·4	81·9	46·0	59·6	57·4	2·7	7·4	1·4	+ 1·2	WSW	W	2·0	0·0	0·1	165	330	0·06
28	Apogee ; New	29·752	68·8	54·1	59·1	55·2	86·1	44·0	60·6	58·4	3·9	9·0	2·2	+ 3·9	W	SW	0·0	0·0	0·0	65	151	0·00
29	Greatest Declination N.	29·660	71·4	54·9	60·9	57·2	117·7	54·0	60·6	58·4	3·7	12·4	1·3	+ 5·5	SW	E	1·0	0·0	0·0	100	232	0·03
30	..	29·339	66·8	56·1	59·1	56·3	84·8	54·5	60·6	58·4	2·8	6·3	1·9	+ 3·4	E ; SE	S ; SW	0·0	0·0	0·0	120	241	0·07
31	..	29·793	64·8	54·0	57·4	51·6	77·0	50·8	61·6	59·4	5·8	9·5	4·4	+ 1·3	NW	W	0·0	0·0	0·0	45	136	0·00
Means	..	29·726	66·4	47·9	55·4	50·3	99·6	43·4	59·3	57·1	5·1	12·9	1·9	+ 2·5	...	...	..	..	..	Sum 2990	Sum 6781	Sum 2·84

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·106 on the 2nd; the second maximum ,, was 29in·927 on the 6th; the third maximum ,, was 29in·794 on the 8th; the fourth maximum ,, was 29in·788 on the 14th; the fifth maximum ,, was 30in·010 on the 17th; the sixth maximum ,, was 29in·982 on the 26th;

The first minimum in the month was 29in·788 on the 1st; the second minimum ,, was 29in·577 on the 4th; the third minimum ,, was 29in·594 on the 7th; the fourth minimum ,, was 29in·404 on the 9th; the fifth minimum ,, was 29in·671 on the 15th; the sixth minimum ,, was 29in·329 on the 21st; the absolute minimum ,, was 29in·319 on the 30th.

The range in the month was 0in·787.

The mean for the month was 29in·726, being 0in·044 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 81°·5 on the 6th; the lowest was 37°·8 on the 3rd; and the range in the month was 43°·7.

The mean ,, of all the highest daily readings was 66°·4, being 2°·0 *higher* than the average of the preceding 21 years.

The mean ,, of all the lowest daily readings was 47°·9, being 3°·8 *higher* than the average of the preceding 21 years.

The mean daily range was 18°·5, being 1°·8 *less* than the average of the preceding 21 years.

The mean for the month was 55°·4, being 2°·6 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
May 1			10, oc.-shs.-r.	10, li.-cl : 10, h.-r
2			10	7, li.-cl : 0
3			10 : 10, oc.-r	10 : 1
4			10, li.-cl	10, ci.-s, ci : oc.-r
5			10, li.-cl	7, ci.-cu, cu.-s, ci.-s : 0 : 1
6			8, ci.-cu, ci.-s.	8. ci.-cu, ci.-s : 10, t.-s
7			7, ci, h : 10, r	10, h.-r : 10
8			3, ci.-cu, ci	9, ci.-cu, cu.-s, ci.-s : 10, th.-r
9			10, r : 7, ci.-cu, cu.-s	10, cu.-s, ci.-s, shs.-r : 10
10			8, ci.-cu, cu.-s, ci	8, ci.-s, oc.-r
11			10, cu, cu.-s, ci.-s, oc.-r	10, cu, cu.-s, ci.-s, shs.-r
12			10, cu.-s, ci.-s	10, ci.-s : 10, cu.-s, ci.-s, s
13	0	0 : s	10	10, ci.-s
14	0	0	7, ci.-cu, ci.-s	10
15	0	0	10, r	10, r : 10, h.-r
16	0	0	10, ci.-s	10. ci.-s : 10, oc.-r
17	0	0	0, h	8, ci.-s, h
18	0	0	10, li.-cl, h	10, ci.-s, h : 2, ci, h
19	0	0	0, h	10, cu.-s, ci.-s : 9, cu, ci.-cu, ci
20	0	0 : m	10, ci.-s	10, cu.-s, ci.-s : 0
21	0	s, N, sps. : 0	10, cu.-s, ci.-s, r	10, ci.-s : 7, oc.-r : 1
22	0 : s, N, sps	0	7, ci.-s	6, ci.-cu, ci, hl, r : 10
23	0	0	10, oc.-r	10, ci.-s : oc.-r
24	0	v	10, ci.-s	10, cu, ci.-cu, ci : 4, ci.-s, ci
25	0	0 : w	0, h	0, h
26	m	m	3, ci, h	10, ci.-s. ci : 2, cu, ci.-cu
27	w	w	10, r	10, oc.-r : 10, ci.-cu, ci.-s
28	0	0	10	10
29	v	v	10	7, ci.-cu, ci.-s : 1
30	s	s	10, oc.-r	10 : 10, th.-r
31	0	0 : w	10, ci.-s	10, ci.-s : 7, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 60°·0 on the 29th ; and the lowest was 40°·9 on the 21st.

The mean ,, was 50°·3, being 4°·9 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}·365$ being $0^{in}·065$ *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{gr}·0$, being $0^{gr}·6$ *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 84 (that of Saturation being represented by 100), being 8 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 534 grains, being 4 grains *less* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 8·3.

WIND.

The proportions were of N. 4, S. 7, W. 13, and E. 7. The greatest pressure in the month was $4^{lbs}·0$ on the square foot on the 9th, and 22nd.

RAIN.

Fell on 16 days in the month, amounting to $2^{in}·8$, as measured in the simple cylinder gauge partly sunk below the ground ; being $0^{in}·7$ *greater* than the average fall of the preceding 47 years.

ELECTRICITY.—The Electrometer was not in action from May 1 to 12.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
June 1	..	29·862	72·6	50·2	59·9	51·8	125·0	44·8	61·6	59·4	8·1	19·3	0·0	+ 3·5	NE	NE ; SE	0·0	0·0	0·0	40	120	0·00
2	..	29·909	73·5	47·0	59·7	52·7	105·5	40·0	62·6	60·4	7·0	16·9	3·4	+ 3·1	NE	SW	0·0	0·0	0·0	70	158	0·00
3	..	29·904	68·5	54·6	58·9	51·5	106·0	50·4	62·6	60·4	7·4	15·6	6·5	+ 2·1	W	W	2·0	0·0	0·0	135	279	0·01
4	..	29·965	71·8	45·7	57·5	48·0	126·0	40·0	62·6	60·4	9·5	20·2	1·9	+ 0·4	WNW	SW	0·0	0·0	0·0	105	217	0·00
5	First Quarter; In Equator.	29·580	63·8	46·5	53·7	51·3	81·3	44·0	63·6	61·4	2·4	10·8	0·2	— 3·4	SW ; S	SW	0·0	0·0	0·0	85	193	0·20
6	..	29·513	65·4	52·7	59·1	53·4	112·0	48·0	63·6	61·4	5·7	10·6	0·7	+ 1·9	SW	SW	7·0	0·0	1·5	245	516	0·04
7	..	29·631	71·0	56·3	61·7	50·0	119·4	52·0	63·6	61·4	11·7	20·2	8·4	+ 4·4	WSW	SW	5·0	0·0	1·0	170	347	0·00
8	..	29·778	70·0	50·3	57·7	49·0	117·0	48·0	63·6	61·4	8·7	15·5	5·3	+ 0·3	SW	WSW ; W	2·5	0·0	0·1	120	269	0·08
9	..	29·834	67·2	45·3	55·3	47·0	117·2	37·0	63·6	61·4	8·3	17·6	2·9	— 2·2	W	WSW	1·0	0·0	0·0	100	219	0·00
10	..	29·745	66·6	43·4	54·1	46·5	115·0	..	63·6	61·4	7·6	16·7	0·9	— 3·6	SW	SSW ; SSE	0·0	0·0	0·0	100	210	0·07
11	Perigee; Greatest Dec. S.	29·264	69·0	50·0	57·8	50·5	116·1	49·0	63·6	61·4	7·3	17·3	3·6	— 0·2	SSE ; SSW	SSW	4·0	0·0	0·4	180	362	0·01
12	Full	29·198	60·8	51·5	54·2	52·0	70·8	47·3	62·6	60·4	2·2	4·4	1·2	— 4·1	SW	SSW ; SW	9·0	0·0	1·2	230	481	0·51
13	..	29·431	66·6	51·5	56·1	48·1	114·0	50·0	62·6	60·4	8·0	13·9	5·8	— 2·4	W	WSW	9·0	0·0	1·7	220	448	0·00
14	..	29·527	62·6	49·1	52·2	49·3	97·0	42·6	61·6	59·4	2·9	6·5	1·5	— 6·6	WSW	WSW	1·0	0·0	0·0	145	295	0·25
15	..	29·665	67·8	45·5	55·7	52·8	96·0	41·0	60·6	58·4	2·9	11·7	0·4	— 3·3	WSW	W	2·0	0·0	0·0	65	164	0·35
16	..	29·835	68·7	49·8	55·6	49·9	107·9	48·3	60·6	58·4	5·7	13·3	0·0	— 3·7	NE	N	0·0	0·0	0·0	35	107	0·01
17	..	29·869	69·3	47·5	56·6	50·1	99·0	41·0	60·6	58·4	6·5	18·0	0·4	— 2·8	NW	W ; SW	1·0	0·0	0·0	110	262	0·19
18	In Equator	29·829	64·4	49·7	54·0	48·0	97·0	49·5	60·6	58·4	6·0	14·8	1·6	— 5·5	N	N	2·6	0·0	0·2	120	279	0·02
19	Last Qr.	29·897	63·5	48·5	53·7	46·4	85·3	41·4	60·6	58·4	7·3	15·4	4·0	— 5·9	NW	SW	0·0	0·0	0·0	120	252	0·02
20	..	29·743	63·6	50·0	54·1	46·3	94·8	44·3	60·6	58·4	7·8	15·2	4·4	— 5·7	NW	NW ; WSW	2·5	0·0	0·3	120	260	0·01
21	..	29·620	61·2	51·1	54·7	47·9	80·0	49·0	60·6	58·4	6·8	11·4	1·0	— 5·2	W	W	1·0	0·0	0·0	140	301	0·00
22	..	29·597	63·7	50·9	55·4	46·6	86·0	50·6	59·6	57·4	8·8	18·2	5·4	— 4·6	NW	NW ; W	1·5	0·0	0·0	160	313	0·00
23	..	29·728	70·6	52·0	56·4	49·0	115·5	51·5	59·6	57·4	7·4	15·3	3·2	— 3·8	W ; N	Variable	0·0	0·0	0·0	85	192	0·06
24	Apogee	29·797	70·8	49·2	57·9	52·2	99·1	47·4	60·6	58·4	5·7	13·9	3·2	— 2·5	W	W ; N	0·0	0·0	0·0	120	256	0·00
25	Greatest Declination N.	29·985	64·2	49·9	55·4	49·6	87·0	42·3	60·6	58·4	5·8	11·2	1·3	— 5·2	N	N ; SSW	0·0	0·0	0·0	95	203	0·00
26	..	29·847	72·5	50·3	60·3	52·2	115·2	47·0	60·6	58·4	8·1	19·6	0·4	— 0·5	SSW ; W	W	0·0	0·0	0·0	105	235	0·00
27	New	29·625	64·0	50·7	55·2	44·1	91·0	46·7	60·6	58·4	11·1	19·8	3·8	— 5·8	W	W	1·5	0·0	0·0	130	298	0·03
28	..	29·758	65·0	43·8	52·8	45·9	100·0	35·4	60·6	58·4	6·9	12·2	1·5	— 8·5	W ; NW	NW	1·0	0·0	0·0	85	242	0·00
29	..	29·827	70·0	44·4	57·5	52·2	110·0	36·0	60·6	58·4	5·3	16·9	0·4	— 4·0	SW	SW	0·0	0·0	0·0	115	292	0·00
30	..	29·766	65·5	53·1	56·5	44·3	105·4	53·0	60·6	58·4	12·2	18·7	5·2	— 5·0	SW ; N	NW	1·5	0·0	0·0	135	278	0·07
Means	..	29·718	67·1	49·3	56·3	49·3	103·1	45·4	61·5	59·4	7·0	15·0	2·6	— 2·6	...	...	..	..	..	Sum 3685	Sum 8048	Sum 1·93

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·030 on the 4th ; the first minimum in the month was 29in·458 on the 6th.
The second maximum ,, was 29in·863 on the 8th ; the absolute minimum ,, was 29in·078 on the 12th.
The third maximum ,, was 29in·922 on the 17th ; the third minimum ,, was 29in·750 on the 18th.
The fourth maximum ,, was 29in·959 on the 19th ; the fourth minimum ,, was 29in·569 on the 21st.
The fifth maximum ,, was 30in·016 on the 25th ; the fifth minimum ,, was 29in·592 on the 27th.
The sixth maximum ,, was 29in·864 on the 29th.
The range in the month was 0in·952.
The mean for the month was 29in·718, being 0in·075 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 73°·5 on the 2nd ; the lowest was 43°·4 on the 10th.
The range ,, was 30°·1.
The mean ,, of all the highest daily readings was 67°·1, being 4°·1 *lower* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 49°·3, being 0°·9 *lower* than the average of the preceding 21 years.
The mean daily range was 17°·8, being 3°·1 *less* than the average of the preceding 21 years.
The mean for the month was 56°·3, being 2°·9 *lower* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
June 1	w	w	3, ci.-cu, ci	3, ci
2	w, N	m	0, h	7, ci.-s, ci, h : 10, cu.-s, ci.-s
3	0	0 : m	10	10, oc.-shs.-r : 0
4	w	w : s, g-cur	5, cu, ci.-cu, ci.-s	5, cu, ci.-cu, ci : 3, li.-cl
5	s N, s P, sps, g-cur	s N, s P, sps, g-cur	10 : r	10 : 10, h.-r
6	0	0 : w	10, cu.-s, ci.-s	10, cu.-s, ci.-s
7	0	m	7, cu, cu.-s, ci.-s	7, cu, cu.-s, ci.-s : 1 li.-cl : 10
8	v	v	10, r : 10, cu, ci.-cu, ci.-s	10, cu, cu.-s : 0
9	0	s N, s P, sps, g-cur	7, cu, ci.-cu, ci.-s	7, cu, cu.-s : t, shs.-r
10	w	w : s N, sps	7, cu, cu.-s	10, cu.-s, ci.-s : oc.-r
11	0	0	7, cu, cu.-s	7, ci.-cu, cu.-s, oc.-r : sh.-r, lu.-rainbow
12	0	s N, s P, sps, g-cur : 0	10, h.-shs.-r	10, h.-r : 10, ci.-s, sc
13	0	0 : w	10, cu, cu.-s, ci.-s : h.-shs.-r	10, ci.-cu, cu.-s, ci.-s : 5, li.-cl
14	s N, sps, g-cur	0	10, r : 10, h.-r	10, oc.-shs.-r : 0
15			10, li.-cl : 5, cu, ci.-cu, ci	10 : oc.-shs.-r
16	0	0 : w	10 : 5, ci.-cu, ci.-s	10 : sh.-r : 0, f
17	w	0 : s N, sps	7, ci.-cu, ci, h	10, ci.-cu, ci, h : r
18	w	w	10, r	10, n, ci.-s : 8, ci.-cu, cu.-s, ci.-s, shs.-r : 0
19	m	w N : s	10	10, ci.-s : oc.-r
20	0	0	10	10, ci.-cu, ci.-s
21	0	0	10 : 10, oc.-r	10, ci.-s : th.-r
22	m	w N : s	10	10 : 10, r
23	w	0	10, th.-r	5, ci.-cu, cu.-s, ci
24	m	m	10	10 : 5, ci.-s, ci
25	m	w N : m	10, cu.-s, ci.-s	10, ci.-s : 5, ci.-cu, ci, h
26	m	m : s	3, li.-cl	8, ci.-cu, cu.-s : 10, s, ci.-s
27	0	w N : 0	10, ci.-s	10, cu, cu.-s, ci.-s : h.-sh.-r
28	0	w N : w	10, ci.-cu, cu.-s, ci.-s	10, cu.-s, ci.-s, r : 7, ci.-cu, ci
29			7, ci : 10, ci.-s	10, ci.-s
30			9, ci.-cu, ci.-s	10, ci.-s : 5, ci.-cu, ci.-s, s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·0 on the 6th; and the lowest was 43°·4 on the 27th.

The mean ,, was 49°·3, being 1°·6 *lower* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·352, being 0^{in}·022 *less* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·0, being 0^{gr}·2 *less* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 77 (that of Saturation being represented by 100), being 3 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 533 grains, being 2 grains *greater* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·8.

WIND.

The proportions were of N. 6, S. 7, W. 16, and E. 1. The greatest pressure in the month was 9^{lbs}·0 on the square foot on the 12th and 13th.

RAIN.

Fell on 17 days in the month, amounting to 1^{in}·9, as measured in the simple cylinder gauge partly sunk below the ground; being the *same* as the average fall of the preceding 47 years.

ELECTRICITY.—The insulating lamp was not burning on June 15, 29, and 30.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer, read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°		°	°	°	°	°	°			lbs.	lbs.	lbs.	mil's.	miles.	in.
July 1	..	29·762	69·0	48·7	57·9	53·8	88·6	38·7	56·6	54·4	4·1	12·4	0·5	— 3·6	WSW	W	3·0	0·0	0·2	205	428	0·00
2	..	29·656	70·3	50·0	56·9	49·1	107·1	46·0	58·6	56·9	7·8	18·4	4·8	— 4·5	WSW	W	4·0	0·0	0·8	170	352	0·00
3	In Equator	29·724	60·7	48·0	51·4	48·3	84·0	41·9	59·6	57·4	3·1	9·9	1·3	—10·0	WSW	W	0·0	0·0	0·0	90	203	0·27
4	First Qr.	29·723	67·5	45·6	56·2	50·8	110·5	44·0	59·6	57·4	5·4	14·6	0·7	— 5·3	WNW	SW	0·0	0·0	0·0	55	145	0·00
5	..	29·419	76·0	51·6	61·5	56·1	118·4	49·8	61·1	58·9	5·4	14·3	2·0	— 0·1	SE	SE ; SW	1·0	0·0	0·0	100	214	0·01
6	..	29·313	71·0	55·7	60·6	52·4	113·0	51·0	61·1	58·9	8·2	18·5	3·8	— 1·1	SW	SW	2·0	0·0	0·2	190	381	0·03
7	..	29·501	66·5	54·7	58·0	54·1	101·0	52·7	59·6	57·4	3·9	9·7	1·7	— 3·8	W	WSW	4·0	0·0	0·5	130	274	0·18
8	..	29·902	75·5	53·7	61·6	54·8	116·0	51·0	61·6	59·9	6·8	16·2	1·2	— 0·1	WNW	SW	2·0	0·0	0·0	135	263	0·00
9	Greatest Declination S.	29·825	66·5	54·0	58·9	55·7	86·0	52·0	60·1	57·9	3·2	9·9	1·9	— 2·6	SW	SW	4·0	0·0	0·6	180	372	0·02
10	Perigee	29·608	66·6	50·0	56·6	52·3	100·2	48·5	61·1	58·9	4·3	9·9	1·2	— 4·9	WSW	W	3·0	0·0	0·5	150	324	0·25
11	Full	29·737	65·8	44·7	53·3	47·0	110·7	42·2	62·6	60·4	6·3	16·6	1·8	— 8·3	NW	SW	1·0	0·0	0·1	105	214	0·00
12	..	29·316	72·2	51·0	58·4	55·7	107·5	46·9	59·6	59·4	2·7	8·6	1·0	— 3·3	SW	W	3·0	0·0	0·2	140	281	0·25
13	..	29·718	74·3	49·3	60·4	54·6	119·0	42·0	63·6	61·4	5·8	17·3	2·3	— 1·4	WNW	SW	2·0	0·0	0·1	145	291	0·00
14	..	29·699	74·8	54·9	63·2	56·5	119·0	45·0	62·6	60·4	6·7	16·7	5·5	+ 1·5	W	SW	3·0	0·0	0·2	155	314	0·00
15	In Equator	29·621	71·6	51·0	58·3	51·4	114·5	49·0	62·1	59·9	6·9	14·0	1·8	— 3·4	W	SW	3·0	0·0	0·5	165	329	0·18
16	..	29·613	68·0	48·8	57·2	52·7	114·5	47·1	62·6	60·4	4·5	9·3	2·1	— 4·5	W	W	5·0	0·0	0·6	150	300	0·34
17	..	29·726	69·8	46·9	57·0	51·9	111·5	44·5	62·6	60·4	5·1	12·6	1·4	— 4·7	W	SW	2·0	0·0	0·2	135	253	0·00
18	Last Qr.	29·824	72·6	54·5	61·6	51·2	120·0	51·8	62·6	60·4	10·4	16·7	6·8	— 0·1	SW ; NW	SW	2·0	0·0	0·3	105	230	0·02
19	..	29·864	66·3	52·9	58·5	53·7	94·0	50·8	64·1	61·9	4·8	10·6	3·4	— 3·2	SW	WSW ; W	4·5	0·0	1·0	200	408	0·00
20	..	29·965	73·0	50·0	59·8	50·1	120·5	48·0	64·1	61·9	9·7	20·5	1·5	— 1·8	W	W	5·0	0·0	1·1	165	352	0·00
21	..	30·047	72·2	56·8	61·1	49·9	113·8	49·5	64·1	61·9	11·2	23·0	8·9	— 0·4	NW	NW	2·0	0·0	0·3	65	174	0·00
22	Apogee	30·002	70·0	44·6	57·1	51·1	113·2	37·5	64·6	62·4	6·0	14·9	2·4	— 4·4	WSW	SW	0·0	0·0	0·0	25	114	0·00
23	Greatest Declination N.	29·786	62·1	51·4	55·7	55·2	70·5	50·4	64·6	62·4	0·5	5·7	0·0	— 5·8	E	N	0·0	0·0	0·0	40	165	0·11
24	..	29·844	70·5	51·3	58·7	56·8	105·3	48·1	63·6	61·4	1·9	4·5	0·8	— 2·9	SW	SW	7·0	0·0	1·3	215	443	0·00
25	..	29·916	75·6	56·6	64·5	55·4	123·8	50·4	64·6	62·4	9·1	19·7	5·6	+ 2·7	W	W	5·0	0·0	1·3	55	184	0·00
26	New	29·884	79·0	48·7	64·1	54·7	125·6	43·0	64·6	62·4	9·4	21·4	1·1	+ 2·0	SW	SW	0·0	0·0	0·0	70	185	0·00
27	..	29·913	75·0	52·2	61·8	48·5	129·5	45·0	65·1	62·9	13·3	21·8	0·0	— 0·5	W	WNW	2·0	0·0	0·3	55	182	0·00
28	..	29·956	71·4	46·0	58·9	48·5	110·2	43·4	66·1	63·9	10·4	20·7	1·4	— 2·6	Calm	Calm	0·0	0·0	0·0	5	61	0·00
29	..	29·908	75·6	48·0	61·1	49·4	124·4	45·0	65·6	63·4	11·7	23·8	0·0	— 1·4	Calm	N ; SE	0·0	0·0	0·0	20	124	0·00
30	In Equator	29·938	71·5	53·7	60·0	50·1	112·0	52·1	66·6	64·4	9·9	18·2	2·8	— 2·5	N	N ; WSW	0·0	0·0	0·0	70	198	0·03
31	..	29·908	74·2	49·8	60·6	52·8	121·0	45·0	66·6	64·4	7·8	17·6	3·8	— 1·9	SW	SW	4·0	0·0	0·8	165	341	0·00
Means	..	29·762	70·8	50·8	59·1	52·4	109·8	46·9	62·6	60·5	6·7	15·1	2·4	— 2·7	...	...	..	..	..	Sum 3655	Sum 8099	Sum 1·69

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·944 on the 8th; the first minimum in the month was 29in·316 on the 6th.
The second maximum .. was 29in·771 on the 11th; the second minimum .. was 29in·595 on the 10th.
The third maximum .. was 29in·747 on the 13th; the absolute minimum .. was 29in·294 on the 12th.
The absolute maximum .. was 30in·098 on the 21st; the fourth minimum .. was 29in·588 on the 16th.
The fifth maximum .. was 29in·989 on the 25th; the fifth minimum .. was 29in·765 on the 23rd.
The sixth maximum .. was 29in·990 on the 28th; the sixth minimum .. was 29in·851 on the 26th.
The range in the month was 0in·804.
The mean for the month was 29in·762, being 0in·033 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 79°·0 on the 26th; the lowest was 44°·6 on the 22nd.
The range .. was 34°·4.
The mean .. of all the highest daily readings was 70°·8, being 2°·9 *lower* than the average of the preceding 21 years.
The mean .. of all the lowest daily readings was 50°·8, being 2°·4 *lower* than the average of the preceding 21 years.
The mean daily range was 20°·0, being 0°·5 *less* than the average of the preceding 21 years.
The mean for the month was 59°·1, being 2°·7 *lower* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
July 1	m	m : w	10, ci.-s, th.-r	10, ci.-s, sc
2	o	m	10, ci.-s : 10, h.-shs.-r	10, ci.-s, r : 7, cu, ci.-cu, ci.-s : o, h
3	w	s N, sps, g cur : s P	10, ci.-s, li.-cl : h.-r	10, s, r
4	v	v	7, ci.-cu, ci	10, ci.-cu, c
5	w : s N, sps, g cur	s N, sps, g cur : w	10, oc.-r	10, th.-r : 10, cu, ci.-cu, cu.-s, shs.-r
6	m	m	o : 10, ci.-cu, ci.-s	10, cu.-s, ci.-s
7	o : w	w : m	10, ci.-cu, ci.-s : h.-sh.-r	10 : 10, oc.-shs.-r
8	w	w : m	3, cu.-s, ci.-s	8, ci.-cu, cu.-s, ci.-s : o
9	w	w	10, th.-r	10, ci.-s : 10, oc.-r
10	s N, s P, sps, g cur	s N, s P, sps, g cur	10, h.-r : 10, ci.-cu, cu.-s, ci.-s	10, ci.-s : h.-r
11	o	o	10	10, ci.-cu, cu.-s, ci.-s : 10
12	o	o : s N, s P, sps, g cur	10, r	10, ci.-s : 10, t, h.-r : 1
13	w	w	3, li.-cl	10, ci.-cu, ci.-s : o
14	m	m	o : 10, ci.-s	9, ci.-cu, ci : o
15	o	o : s N, s P, sps, g cur	10, ci.-cu, ci	10, ci.-cu, cu.-s, ci.-s : h.-r
16	o	s N, s P, sps, g cur : o	7, ci.-cu, ci, r : 10	10, cu.-s, ci.-s, h.-sh.-r : 10, ci.-s
17	o	o : s	3, li.-cl : 5, ci.-cu, cu.-s	10 : th.-r
18	o : N, w	N, w : m	10, oc.-r : 6, cu.-s, ci	10, ci.-cu, cu.-s : 7, li.-cl
19	o	o : s	10, ci.-cu, ci.-s	10, th.-r : o
20	o	o : w	7, cu, ci.-cu	7 : 10
21	o	o : w	8, ci.-cu, cu.-s	8, ci.-cu, cu.-s
22	w	o	8, ci.-cu, ci.-s	10, ci.-cu, ci.-s : 10, oc.-r
23	o	o : w	10, r	10, th.-r : o
24	w	w	10	10 : o
25	w	o : w	3, ci.-cu, ci	o : 5, li.-cl
26	o	m : s	o	o
27	o	o	o	o
28	o	o : w	o, h	3, li.-cl : o, h
29	m	m : w	o, h	7, ci.-cu, cu.-s
30	w	w : m	10, s, ci.-s, r : 7, ci.-cu, ci	7, ci.-cu, ci
31	m	o	8, ci.-cu, ci.-s	2, li.-cl : 5, ci.-s, ci

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 62°·0 on the 24th; and the lowest was 43°·0 on the 2nd

The mean „ was 52°·4, being 1°·5 *lower* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·394 being 0^{in}·023 *less* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{grs}·5, being 0^{grs}·1 *less* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100), being 2 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 531 grains, being 3 grains *greater* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·2.

WIND.

The proportions were of N. 3, S. 8, W. 19, and E. 1. The greatest pressure in the month was 7^{lbs}·0 on the square foot on the 24th.

RAIN.

Fell on 12 days in the month, amounting to 1^{in}·7, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·0 *less* than the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Aug. 1	..	29·846	79·9	52·5	64·8	51·5	128·2	45·2	66·6	64·4	13·3	25·3	0·6	+ 2·3	SW	SW	1·5	0·0	0·4	95	202	0·00
2	..	29·816	76·5	50·1	61·8	54·2	123·0	41·1	66·6	64·4	7·6	20·6	0·0	— 0·5	SW	NW ; W	1·5	0·0	0·0	45	172	0·00
3	First Qr.	29·924	76·8	48·7	61·0	52·1	123·0	43·0	66·6	64·4	8·9	18·4	0·0	— 1·2	WSW	SW	0·0	0·0	0·0	20	159	0·14
4	..	29·768	74·5	48·8	61·3	51·8	123·0	44·0	66·6	64·4	9·5	19·8	3·4	— 0·8	SW	SE	2·0	0·0	0·2	80	213	0·00
5	Greatest Declination S.	29·513	73·0	56·8	63·1	52·0	116·0	55·0	67·1	64·9	11·1	18·7	6·5	+ 1·1	SW	SW	5·0	0·0	1·3	185	390	0·00
6	Perigee	29·635	72·0	50·8	59·0	50·1	118·0	42·0	67·1	64·9	8·9	17·3	3·4	— 3·0	WSW	SW	8·0	0·0	1·4	175	381	0·03
7	..	29·254	70·2	54·5	58·9	55·8	112·0	47·8	66·6	64·4	3·1	9·2	0·4	— 3·1	SSW	WSW	18·0	0·0	3·0	215	452	0·23
8	..	29·385	68·6	51·5	56·1	51·4	112·0	50·0	66·1	63·9	4·7	8·9	2·0	— 5·9	WSW	W	7·0	0·0	1·4	135	307	0·08
9	Full	29·628	69·2	53·2	58·7	51·6	109·0	49·0	65·6	63·4	7·1	11·2	2·4	— 3·2	WNW	NW ; N	2·5	0·0	0·2	70	226	0·02
10	..	29·850	66·8	47·3	56·6	52·1	103·0	40·2	63·6	61·4	4·5	13·7	1·3	— 5·2	WNW	WNW	2·0	0·0	0·1	70	209	0·00
11	..	29·969	66·8	54·7	59·2	52·8	89·0	50·7	64·1	61·9	6·4	14·2	4·4	— 2·5	WNW	WNW	0·0	0·0	0·0	30	158	0·00
12	In Equator	29·968	74·0	48·8	59·8	54·2	116·6	44·0	64·1	61·9	5·6	11·5	1·3	— 1·8	WSW	SW	0·0	0·0	0·0	105	220	0·00
13	..	29·774	71·9	50·8	60·6	58·1	101·3	45·0	63·6	61·4	2·5	8·3	1·3	— 0·9	SW	SW	2·0	0·0	0·1	95	228	0·00
14	..	29·603	70·5	55·6	58·7	57·8	101·0	55·2	63·6	61·4	0·9	3·8	0·0	— 2·8	SW	SW	1·0	0·0	0·0	70	160	0·41
15	..	29·638	67·0	53·9	58·9	57·4	92·5	49·8	64·1	61·9	1·5	5·8	0·0	— 2·5	SW	Calm	0·0	0·0	0·0	2	72	0·34
16	..	29·646	65·5	51·7	57·4	57·4	81·0	45·0	64·1	61·9	0·0	1·0	0·0	— 4·0	NE	NE ; N	1·0	0·0	0·1	125	285	0·19
17	Last Qr.	29·648	61·0	55·6	56·9	56·9	67·3	53·9	64·1	61·9	0·0	1·3	0·0	— 4·4	N	N	1·5	0·0	0·1	125	276	1·27
18	Apogee	29·797	62·6	53·2	56·1	52·7	75·0	52·3	63·6	61·9	3·4	9·1	0·0	— 5·0	N	N ; Calm	1·5	0·0	0·1	60	157	0·17
19	Greatest Declination N.	29·802	74·8	49·4	61·5	56·7	122·7	46·3	64·1	61·9	4·8	14·8	0·0	+ 0·6	SW	SW	1·0	0·0	0·0	55	197	0·00
20	..	29·840	74·0	51·0	60·7	57·7	121·2	44·2	64·1	61·9	3·0	9·4	0·0	— 0·1	SW	Calm	0·0	0·0	0·0	..	42	0·00
21	..	29·758	73·4	56·5	63·3	58·8	102·0	56·0	64·1	61·9	4·5	12·4	0·4	+ 2·7	Calm	SW	0·0	0·0	0·0	25	138	0·00
22	..	29·767	72·0	56·5	60·1	55·4	115·2	56·1	64·1	61·4	4·7	16·0	1·6	— 0·3	W	W	0·0	0·0	0·0	50	203	0·13
23	..	30·011	71·2	46·8	58·8	54·6	120·5	43·0	64·1	61·9	4·2	11·5	0·0	— 1·5	WSW	Calm	0·0	0·0	0·0	10	105	0·00
24	..	30·123	68·6	44·7	57·1	48·3	120·0	41·0	64·1	61·9	8·8	18·5	0·0	— 3·2	Calm	Calm	0·0	0·0	0·0	10	105	0·00
25	New	30·042	70·9	46·7	58·4	49·7	116·0	41·3	64·1	61·9	8·7	18·4	3·0	— 1·8	Calm ; SE	E	3·5	0·0	0·3	75	195	0·00
26	In Equator	29·756	76·0	48·6	61·7	52·6	125·7	44·0	64·3	62·1	9·1	22·1	4·4	+ 1·8	ENE	E	2·0	0·0	0·2	70	175	0·00
27	..	29·821	73·0	54·5	61·2	52·0	125·0	51·0	64·6	62·4	9·2	17·8	4·2	+ 1·5	NE	NE ; SE	0·0	0·0	0·0	20	100	0·00
28	..	29·952	72·4	48·8	58·5	50·4	121·5	44·6	64·6	62·4	8·1	21·2	1·2	— 1·1	NE	NE ; SE	0·0	0·0	0·0	20	85	0·00
29	..	29·977	69·5	49·1	56·8	49·7	116·5	44·9	64·6	62·4	7·1	17·8	1·9	— 2·6	NE	NE	0·0	0·0	0·0	45	125	0·00
30	..	29·917	69·0	48·5	56·8	51·2	117·0	39·7	64·6	62·4	5·6	15·3	2·9	— 2·3	NE	WSW ; Calm	0·0	0·0	0·0	20	105	0·00
31	..	29·906	70·1	53·5	60·0	51·4	117·5	50·0	64·6	62·4	8·6	14·8	1·6	+ 1·0	NE	NE	0·0	0·0	0·0	40	142	0·00
Means	..	29·785	71·0	51·4	59·5	53·5	110·7	46·9	64·8	62·6	6·0	13·8	1·6	— 1·6	...	...	..	..	..	Sum 2142	Sum 5984	Sum 3·01

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·933 on the 3rd ; the first minimum in the month was 29in·805 on the 2nd.
The second maximum ,, was 29in·649 on the 6th ; the second minimum ,, was 29in·496 on the 5th.
The third maximum ,, was 30in·014 on the 12th ; the absolute minimum ,, was 29in·187 on the 7th.
The fourth maximum ,, was 29in·867 on the 20th ; the fourth minimum ,, was 29in·590 on the 14th.
The absolute maximum ,, was 30in·154 on the 24th ; the fifth minimum ,, was 29in·728 on the 22nd.
The sixth maximum ,, was 29in·995 on the 29th. ; the sixth minimum ,, was 29in·738 on the 26th.
The range in the month was 0in·967.
The mean for the month was 29in·785, being 0in·006 *lower* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 79°·9 on the 1st; the lowest was 44°·7 on the 24th; and the range in the month was 35°·2.
The mean ,, of all the highest daily readings was 71°·0, being 1°·9 *lower* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 51°·4, being 2°·0 *lower* than the average of the preceding 21 years.
The mean daily range was 19°·6, being 0°·1 *greater* than the average of the preceding 21 years.
The mean for the month was 59°·5, being 1°·9 *lower* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Aug. 1	o	o : m	o	o
2	m	o : N, s	10, ci.-s	7, ci.-cu, cu.-s : 10, h.-r
3	m	m : w	10, cu.-s, s, h	8, cu.-s, ci.-s : 5, ci.-cu, h
4	m	m	7, li.-cl	
5	w	w : m	8, li.-cl	o : 5, ci.-cu, ci.-s, a
6	s N, s P, sps, g cur	s N, s P, sps, g cur : m	7, li.-cl	8, li.-cl : 8, cu.-s, ci.-s, s
				10, shs.-r : 9, cu.-s, ci.-s
7	o	s N, sps, g cur : m	10, oc.-r	10, r : 10, oc.-shs.-r : o
8	o	s N, s P, sps, g cur	10, li.-cl	10, oc.-r, t : 10, shs.-r
9	o	o	10	10, oc.-r
10	o	o	10, li.-cl, h	10, cu.-s, ci.-s
11	o	o : s	10, li.-cl	10, li.-cl
12	o	o	10, ci.-s	10, ci.-s : o
13	o	o	10, ci.-s	10, ci.-s
14	o	N, m	10, r	10, oc.-r : 7, shs.-r : 1
15	o	s N, s P, sps, g cur	10, r	10, h.-shs.-r : 10, h.-r : 3, s, li.-cl
16	m : N	m : o	10 : 10, h.-r	10 : 10, oc.-r
17	o	o	10, h.-r	10, h.-r
18	o	o	10, r	10 : o, f
19	o	o : s	o	
20	o	o	7, ci, h	4, ci.-cu, ci, li.-cl : o
21	o : w	w : o	10, f	10, ci.-s, ci, h
				10 : 10, oc.-r
22	o	o	10, h.-r	
23	o	o : w	5, ci	7, ci.-cu, cu.-s, ci.-s : o
24	w : o	w : o	o : 10, ci.-cu, ci.-s, h	5, ci.-cu, cu.-s, ci : 10
				3, li.-cl : h
25	w	o : w	1, ci.-cu, ci	o
26	m	m	3, ci	3, ci.-cu, ci : 10, ci.-s
27	w	o : s	7, ci.-s, ci	7, ci.-cu, cu.-s : o
28	v	v	5, ci	o
29	m	m : s, sps	10, ci.-s	10, ci.-cu, cu.-s, ci.-s : o
30	m	m	10	o : 10
31	m	m	10, cu, cu.-s, ci.-s	10, cu.-s, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·6 on the 22nd; and the lowest was 47°·2 on the 29th.

The mean ,, was 53°·5, being 0°·6 *lower* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·410, being 0^{in}·012 *less* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·6, being 0^{gr}·1 *less* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 81 (that of Saturation being represented by 100), being 4 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 530 grains, being 2 grains *greater* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·9.

WIND.

The proportions were of N. 8, S. 6, W. 13, and E. 4. The greatest pressure in the month was 18^{lbs}·0 on the square foot on the 7th.

RAIN.

Fell on 11 days in the month, amounting to 3^{in}·0, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·6 *greater* than the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles	in.
Sept. 1	First Qr.	29·815	66·8	46·5	56·2	51·1	97·3	42·0	64·1	61·9	5·1	13·5	0·2	— 2·6	NE	NE	0·0	0·0	0·0	32	136	0·00
2	Greatest Dec.S Perigee	29·559	71·9	53·6	60·2	53·0	112·4	50·0	64·1	61·9	7·2	15·8	1·8	+ 1·6	NNE	SW	0·0	0·0	0·0	110	278	0·03
3	..	29·495	64·8	48·5	55·2	45·8	110·0	45·1	63·6	61·4	9·4	15·6	2·5	— 3·3	SW	SW	5·0	0·0	1·0	105	247	0·22
4	..	29·645	67·8	46·6	55·8	49·7	104·0	36·2	63·6	61·4	6·1	10·5	1·7	— 2·6	SW	SW ; Calm	0·0	0·0	0·0	15	94	0·00
5	..	29·694	65·0	45·6	54·3	51·8	115·3	43·1	63·6	61·4	2·5	6·1	0·8	— 3·9	Calm	Calm	0·0	0·0	0·0	2	78	0·13
6	..	29·799	68·0	48·7	57·2	53·6	98·8	41·8	62·6	60·4	3·6	9·7	0·8	— 0·8	W	SW	0·0	0·0	0·0	20	141	0·01
7	..	29·868	68·0	52·1	59·1	55·9	89·0	47·6	62·1	59·9	3·2	9·5	0·0	+ 1·3	SW	SW	0·0	0·0	0·0	10	130	0·00
8	Full	29·948	70·8	48·9	59·9	56·9	96·0	47·5	62·1	59·9	3·0	12·1	0·6	+ 2·2	SW	SW ; W	0·0	0·0	0·0	30	151	0·00
9	In Equator	29·881	73·4	56·1	62·9	55·7	115·7	52·0	62·1	59·9	7·2	15·7	3·0	+ 5·3	SW	SW	0·0	0·0	0·0	50	167	0·00
10	..	29·807	62·0	49·2	53·5	51·6	97·4	48·0	62·6	60·4	1·9	10·6	0·8	— 4·0	SW ; NNE	NNE	2·0	0·0	0·0	40	134	0·36
11	..	29·965	64·1	40·4	51·8	47·4	95·0	36·0	62·1	59·9	4·4	16·2	0·0	— 5·6	WSW	W ; SW	0·0	0·0	0·0	15	119	0·00
12	..	30·003	69·8	42·5	56·8	50·5	117·5	38·0	62·1	59·9	6·3	17·5	0·0	— 0·5	SW	SW	2·0	0·0	0·1	100	231	0·00
13	..	29·765	70·6	56·4	61·7	53·5	115·4	54·2	61·6	59·4	8·2	17·6	3·2	+ 4·5	SW	SW	3·0	0·0	0·3	95	259	0·00
14	..	29·660	65·5	56·1	59·2	52·1	94·5	53·0	62·1	59·9	7·1	12·4	4·0	+ 2·2	SW	SSW ; E	2·0	0·0	0·0	15	105	0·06
15	Apogee ; Greatest Dec.N	29·853	73·8	52·1	61·8	54·8	114·6	46·1	62·1	59·9	7·0	17·6	3·2	+ 5·1	ENE	NE	3·0	0·0	0·2	105	237	0·00
16	Last Qr.	30·077	69·9	54·2	59·1	50·5	110·5	49·8	62·1	59·9	8·6	18·2	4·2	+ 2·6	NE	NE	3·5	0·0	0·8	105	241	0·00
17	..	30·217	65·6	46·7	55·4	49·3	87·0	40·1	62·1	59·9	6·1	14·8	1·7	— 0·9	NE	NE	2·0	0·0	0·5	70	174	0·00
18	..	30·234	68·2	43·6	55·1	51·9	104·3	..	61·6	59·4	3·2	12·4	1·6	— 0·9	NE	NE	1·5	0·0	0·1	55	181	0·00
19	..	30·190	71·7	50·1	59·5	49·8	119·0	42·6	61·1	58·9	9·7	20·5	1·0	+ 3·6	ENE	NE	3·0	0·0	0·5	75	255	0·00
20	..	30·080	70·4	50·1	60·2	50·4	116·2	44·2	61·1	58·9	9·8	19·4	1·0	+ 4·6	NE	NE	4·0	0·0	0·8	75	255	0·00
21	..	30·084	60·8	53·1	55·5	49·8	70·3	52·0	61·6	59·4	5·7	8·6	1·5	0·0	ENE	NE	4·0	0·0	0·7	65	241	0·01
22	In Equator	30·077	60·0	51·1	54·6	45·5	77·0	48·9	60·6	58·4	9·1	11·2	7·2	— 0·8	NE	ENE	2·0	0·0	0·2	40	151	0·00
23	New	29·929	65·8	39·2	52·6	48·6	104·0	32·0	60·6	58·4	4·0	12·4	1·6	— 2·7	ENE	ESE	0·0	0·0	0·0	45	128	0·00
24	..	29·742	65·6	45·5	55·9	53·8	88·8	40·0	59·6	57·4	2·1	8·2	0·4	+ 0·9	ENE ; ESE	SE	2·0	0·0	0·3	45	156	0·00
25	..	29·754	68·2	54·5	58·3	55·6	90·3	51·9	60·1	57·9	2·7	7·9	0·0	+ 3·4	SE ; W	SW	1·0	0·0	0·0	70	186	0·13
26	..	29·761	69·8	51·7	59·4	56·9	99·4	46·2	59·6	57·4	2·5	6·7	0·8	+ 4·7	SSW	SW	1·5	0·0	0·1	55	157	0·00
27	Perigee	29·751	66·8	55·5	60·2	58·4	85·5	50·9	59·6	57·4	1·8	4·6	0·0	+ 5·7	Calm	SE	0·0	0·0	0·0	10	44	0·03
28	..	29·760	67·9	54·7	60·1	58·8	95·0	53·9	60·6	58·4	1·3	4·0	0·0	+ 5·8	Calm	SE ; Calm	0·0	0·0	0·0	0	85	0·03
29	Greatest Dec.S	29·633	68·0	57·3	61·0	60·6	79·5	55·0	60·6	58·4	0·4	2·2	0·0	+ 7·0	S	SSE	0·0	0·0	0·0	70	188	0·38
30	First Qr.	29·715	67·2	52·3	58·5	53·0	95·2	50·5	60·6	58·4	5·5	11·7	1·6	+ 4·7	SW	SW	4·0	0·0	1·0	105	238	0·22
Means	..	29·859	67·6	50·1	57·7	52·5	99·8	46·2	61·7	59·5	5·2	12·1	1·5	+ 1·2	...	...	..	..	..	Sum 1629	Sum. 5187	Sum 1·61

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·971 on the 8th ; The absolute minimum in the month was 29in·479 on the 3rd.
The second maximum ,, was 30in·031 on the 12th ; the second minimum ,, was 29in·777 on the 10th.
The absolute maximum ,, was 30in·267 on the 18th ; the third minimum ,, was 29in·643 on the 14th.
The fourth maximum ,, was 29in·791 on the 28th ; the fourth minimum ,, was 29in·686 on the 24th.
the fifth minimum ,, was 29in·575 on the 29th.

The range in the month was 0in·788.
The mean for the month was 29in·859, being 0in·036 *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 73°·8 on the 15th ; the lowest was 39°·2 on the 23rd.
The range .. was 34°·6.
The mean ,, of all the highest daily readings was 67°·6, being 0°·1 *higher* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 50°·1, being 1°·2 *higher* than the average of the preceding 21 years.
The mean daily range was 17°·5, being 1°·1 *less* than the average of the preceding 21 years.
The mean for the month was 57°·7, being 0°·8 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Sept. 1	w	w	10, ci.-s	10, cu.-s, ci.-s
2	w	w N : w	10, ci.-s	5, ci.-cu, ci.-s : 10
3	s N, s P, sps, g cur	s N, s P, sps, g cur : m	10, r	8, ci.-cu, cu.-s, ci.-s, oc.-r : 10
4	o	o	o : 10, ci.-s	10, ci.-cu, ci.-s
5	o	s N, sps, g cur	10, ci.-cu, ci.-s	10, oc.-r : 10, f
6	o	o	10, r : 10, h	10, ci.-cu, ci.-s, gt.-glm : 10, lu.-ha
7	m	m	10, ci.-s	10, ci.-s, oc.-r : o
8	w	w	10, cu.-s, ci.-s	10, ci.-s : 7, ci.-cu, ci.-s, s
9	w	w	5, ci.-cu, ci.-s, ci	10, ci.-cu, cu.-s, ci : 10, ci.-s
10	w N	o	10, ci.-s, r	10, ci.-s, oc.-r : 10, cu.-s : o, f
11	w	w	o : 7, ci. h	7, ci.-cu, ci, h : 10 : 9, ci.-cu
12	m	m	o	o : 10, ci.-cu, cu.-s
13	o	w	7, ci.-cu, cu.-s, ci.-s	7, ci.-cu, cu.-s, ci.-s : 10, ci.-s
14	m	o	10, sl.-r	10, r : o
15	w	o : w	3, ci.-cu, ci	3, ci.-cu, cu.-s, ci : 10
16	w	o : w	10, ci.-s	10, ci.-cu, cu.-s, ci.-s : 8, ci.-s
17	w	w	10, ci.-s	10, ci.-s : o
18	o	o	10, ci.-cu, cu.-s, ci.-s	10, ci.-cu, ci : o : 10
19	w	w	3, ci.-cu, ci	o
20	w	w	o	o : 10
21	o	o : w	10, oc.-r	10
22	m	m : s	10, ci.-s	10, ci.-s : 7 : o
23	m	m	3, ci	10, ci
24	v	v	10, ci.-s	10, ci.-s, th.-r : 10, ci.-s
25	w	w	10, f, h.-r : 10, r	10, ci.-cu, cu.-s, ci.-s
26	w	w	5, ci.-cu, cu.-s : 10, ci.-s	10, ci.-s
27	v	v	5, ci.-s : 10, h.-r	10, ci.-s : 10, t.-s, l
28	m	m	10, f	10, ci.-s : 10, r, l
29	w	w	10, r	10, oc.-r
30	w	w	10, ci.-s, ci	10, ci.-cu, ci.-s, h.-shs.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 63°·1 on the 29th; and the lowest was 45°·1 on the 21st.

The mean ,, was 52°·5, being 1°·4 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·396, being 0^{in}·015 *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·4, being 0^{gr}·2, *greater* than the average of the preceding 21 years.

***Degree of Humidity.*—The mean for the month was 83 (that of Saturation being represented by 100), being 2 *greater* than the average of the preceding 21 years.**

Weight of a Cubic Foot of Air.—The mean for the month was 534 grains, being the *same* as the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·7.

WIND.

The proportions were of N. 6, S. 8, W. 7, and E. 9. The greatest pressure in the month was 5^{lbs}·0 on the square foot on the 3rd.

RAIN.

Fell on 12 days in the month, amounting to 1^{in}·6, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·8 *less* than the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Oct. 1	..	29·973	63·4	43·7	52·2	46·4	107·0	40·0	60·6	58·4	5·8	13·7	0·0	− 1·3	SW ; W	W ; SW	2·0	0·0	0·4	135	287	0·00
2	..	30·007	66·0	50·4	58·5	57·5	84·8	46·2	60·6	58·4	1·0	7·9	0·0	+ 5·1	SW	SW	3·0	0·0	1·2	140	295	0·01
3	..	30·175	71·7	54·5	61·0	57·8	102·4	50·6	60·6	58·4	3·2	11·0	1·9	+ 7·9	WSW	W	2·0	0·0	0·3	80	205	0·00
4	..	30·296	62·4	48·9	55·4	55·4	69·6	48·3	60·6	58·4	0·0	2·3	0·0	+ 2·4	NW	Calm	0·0	0·0	0·0	5	87	0·00
5	In Equator	30·183	65·8	47·7	56·1	51·8	108·0	45·0	60·6	58·4	4·3	12·8	0·0	+ 3·3	NE	E	2·0	0·0	0·0	25	147	0·00
6	..	29·860	70·0	53·0	59·1	56·7	110·1	42·7	60·6	58·4	2·4	8·3	0·0	+ 6·6	SE	Calm	0·0	0·0	0·0	60	181	0·14
7	Full	29·904	58·0	49·3	51·3	47·2	92·7	47·9	60·1	57·9	4·1	9·0	1·1	− 1·0	N	NNE	6·0	0·0	2·3	150	347	0·36
8	..	30·171	65·0	51·3	56·4	52·5	95·0	44·1	59·6	57·4	3·9	10·8	2·8	+ 4·3	NE	ENE	2·0	0·0	0·5	70	210	0·00
9	..	30·103	64·5	51·5	56·0	51·1	110·0	47·6	59·1	56·9	4·9	12·4	0·6	+ 4·1	ENE	NE	2·5	0·0	0·4	55	185	0·00
10	..	29·922	68·4	49·2	57·7	55·9	105·4	45·0	60·1	57·9	1·8	7·7	0·0	+ 6·0	E	E	0·0	0·0	0·0	20	109	0·00
11	..	29·716	66·9	52·6	57·3	55·1	110·0	44·2	60·6	58·4	2·2	7·2	0·0	+ 5·9	Calm	SW	3·0	0·0	0·2	110	238	0·72
12	..	29·548	63·6	53·0	57·0	56·1	69·5	47·4	60·6	58·4	0·9	1·6	0·4	+ 6·0	SW	SW	11·0	0·0	1·6	195	454	0·36
13	Greatest Dec. N. Apogee	29·692	63·0	50·1	54·7	49·1	89·4	43·9	59·6	57·4	5·6	11·2	3·2	+ 4·2	WSW	SW	4·0	0·0	1·1	155	287	0·02
14	..	29·718	65·0	53·2	60·0	56·8	79·5	52·5	58·6	57·4	3·2	6·7	2·6	+ 9·9	SW	SW	4·0	0·0	0·9	150	295	0·02
15	Last Qr.	29·551	71·4	49·0	58·2	55·2	102·7	46·0	59·6	58·4	3·0	14·0	0·6	+ 8·4	SW	SW	3·0	0·0	0·8	125	259	0·01
16	..	29·886	60·1	47·1	52·0	43·4	99·7	44·2	59·6	57·4	8·6	14·6	1·5	+ 2·4	SW ; W	W ; SW	3·5	0·0	0·6	190	401	0·00
17	..	29·460	61·5	46·0	51·2	46·8	82·6	40·2	58·6	57·4	4·4	13·0	2·0	+ 1·8	SW	WSW	11·0	1·5	3·3	200	408	0·26
18	..	29·404	50·6	40·3	44·5	44·0	53·8	37·5	57·6	55·9	0·5	5·3	0·0	− 4·7	SW	SW ; NE ; W	3·0	0·0	0·3	110	251	0·94
19	..	29·342	56·6	37·5	47·2	44·8	66·5	30·0	56·6	54·4	2·4	6·7	1·2	− 1·9	WSW	SW	18·0	0·0	2·1	230	494	0·58
20	In Equator	29·208	56·0	40·6	45·6	38·6	92·9	35·8	54·6	51·4	7·0	11·0	5·1	− 3·5	W	WSW	11·0	1·0	3·7	240	483	0·00
21	..	29·625	56·0	41·0	47·8	41·6	88·2	34·0	56·6	49·4	6·2	14·4	4·0	− 1·1	W	NW ; SW	11·0	0·0	2·4	210	449	0·00
22	..	29·275	60·0	47·0	53·0	51·0	66·6	33·8	52·6	47·9	2·0	6·4	0·0	+ 4·4	SW	WSW	13·0	1·0	4·4	280	576	0·12
23	New	29·154	56·0	44·5	49·3	44·1	94·8	38·3	51·6	48·4	5·2	15·2	4·4	+ 1·0	SW	WSW	22·0	2·0	5·4	230	482	0·00
24	..	29·561	53·7	37·1	43·9	38·3	86·0	..	50·6	48·4	5·6	12·8	0·0	− 4·0	W	WSW	9·0	0·0	0·5	70	227	0·00
25	Perigee	29·744	54·0	33·4	45·3	43·5	76·1	27·9	50·6	48·4	1·8	6·6	0·0	− 2·2	SW	SW	9·0	0·0	0·8	230	494	0·00
26	Greatest Declination S.	29·539	58·0	43·8	49·0	47·2	89·0	39·8	50·6	48·9	1·8	6·4	0·0	+ 1·6	SW	WSW	10·0	0·0	2·0	160	336	0·30
27	..	29·756	56·9	41·5	50·1	46·5	82·3	35·0	50·6	48·4	3·6	8·8	1·2	+ 2·9	SW	SW	9·0	0·0	4·0	210	445	0·00
28	..	29·665	55·0	44·1	46·4	44·5	56·0	40·3	51·6	49·4	1·9	4·0	1·1	− 0·6	SW ; N	NE	5·0	0·0	0·3	10	52	0·04
29	First Qr.	29·789	50·0	37·9	42·4	39·0	68·9	..	50·6	48·9	3·4	8·8	0·0	− 4·4	N	NNE	0·0	0·0	0·0	10	56	0·06
30	..	29·692	51·8	28·5	40·1	40·1	75·8	25·0	50·6	48·4	0·0	5·0	0·0	− 6·5	Calm	SE	2·0	0·0	0·1	55	137	0·02
31	..	29·596	53·8	45·3	48·6	48·6	55·3	42·9	50·1	48·4	0·0	0·8	0·0	+ 2·1	SE	SE	0·0	0·0	0·0	15	64	0·12
Means	..	29·726	60·5	45·6	51·8	48·6	86·1	41·2	56·6	54·3	3·2	8·9	1·1	+ 1·9	...	...	..	..	..	Sum 3925	Sum 8941	Sum 4·08

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·307 on the 4th ; the first minimum in the month was 29in·815 on the 6th.
The second maximum ,, was 30in·202 on the 8th ; the second minimum ,, was 29in·507 on the 12th.
The third maximum ,, was 29in·756 on the 14th ; the third minimum ,, was 29in·492 on the 15th.
The fourth maximum ,, was 29in·926 on the 16th ; the fourth minimum ,, was 29in·420 on the 17th.
The fifth maximum ,, was 29in·545 on the 17th ; the fifth minimum ,, was 29in·298 on the 18th.
The sixth maximum ,, was 29in·599 on the 19th ; the absolute minimum ,, was 28in·958 on the 19th.
The seventh maximum ,, was 29in·747 on the 21st ; the seventh minimum ,, was 29in·095 on the 23rd.
The eighth maximum ,, was 29in·803 on the 25th ; the eighth minimum ,, was 29in·442 on the 26th.
The ninth maximum ,, was 29in·816 on the 27th ; the ninth minimum ,, was 29in·660 on the 28th.
The tenth maximum ,, was 29in·823 on the 29th ; the tenth minimum ,, was 29in·565 on the 31st.
The range in the month was 1in·349.
The mean for the month was 29in·726, being 0in·029 *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 71°·7 on the 3rd ; the lowest was 28°·5 on the 30th ; and the range in the month was 43°·2.
The mean ,, of all the highest daily readings was 60°·5, being 1°·9 *higher* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 45°·6, being 1°·7 *higher* than the average of the preceding 21 years.
The mean daily range was 14°·9, being 0°·2 *greater* than the average of the preceding 21 years.
The mean for the month was 51°·8, being 1°·4 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Oct. 1	w	w	0, h : 3, cu, ci.-cu, ci	4, cu, ci.-cu, ci : lu.-ha : 10, r
2	0	0	10, ci.-s, th.-r	10, ci.-s : th.-r
3	0	w	7, ci.-cu, ci.-s	10, ci.-s : 7, cu, ci.-cu : 0
4	v	v	10, f	10, f
5	m	m	5, cu, ci.-cu, ci	10, ci.-cu, ci : 10, ci.-s
6	m	m	0 : 10, ci.-s, r	8, ci.-cu, cu.-s, ci.-s : 10, r : 0
7	w	s	10, ci.-cu, cu.-s	10, ci.-s, r : 10, r
8	0	w : 0	10, ci.-cu, cu.-s	7, ci.-cu, cu.-s, ci.-s : 10, ci.-s
9	w	w	5, ci.-s, ci : 10, ci.-cu, cu.-s	3, ci.-cu, ci : 0, l
10	m	m	10, t.-s, f	10, ci.-cu, ci.-s : 0
11	0	s N. : m	10, r	10, cu.-s, ci.-s : 0
12	0	0	10, r	10, r : 8, cu.-s, ci.-s
13	m	m	10, ci.-s	10, ci.-cu, ci.-s
14	w	w	10, r : 9, ci.-cu, cu.-s	10, ci.-s : 0
15	v	v	0	10, r : 0
16	w	w	0	5, cu, ci.-cu, cu.-s : 0
17	s N, sps, g cur	w	10, ci.-s, th.-r	10, ci.-cu, cu.-s, ci.-s : 0 : 10 r
18	0	s N, sps, g cur : s	10, ci.-s, r	10, h.-r : 0, f
19	s	s	10, ci.-s	10, h.-r
20	0	0 : w	5, ci.-s, ci	5, ci.-cu, cu.-s, ci.-s : 0, l
21	0	0	10, ci.-s : 3, ci.-cu, ci	0 : 10
22	0	0 : w	10, r	10, ci.-s : 10
23	0	0	5, ci.-cu, cu.-s, ci.-s	5, ci.-cu, cu.-s : 10, ci.-s : 0
24	v	v	2, h	6, cu, ci.-cu, ci
25	v	v	10, ci.-cu, cu.-s, ci.-s	10, ci.-s
26	w : s N	w	10, r	7, ci.-cu, ci.-s
27	0	w	10, ci.-s	10, cu.-s, ci.-s
28	0	w N : w	10, gt.-glm	10, gt.-glm : 10, th.-r
29	0	s	10, ci.-s	10, ci.-cu, cu.-s, ci.-s : 0, f
30	0	s : w	10, f, h.-f : 10, f, r	10, ci.-s : 10, h.-r
31	s	s	10, r	10 : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·8 on the 3rd; and the lowest was 32°·1 on the 30th.

The mean ,, was 48°·6, being 2°·4 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·343 being 0^{in}·028 *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·8, being 0^{gr}·1 *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 89 (that of Saturation being represented by 100), being 2 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 538 grains, being 1 grain *less* than average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·1.

WIND.

The proportions were of N. 4, S. 8, W. 13, and E. 6. The greatest pressure in the month was 22^{lbs}·0 on the square foot on the 23rd.

RAIN.

Fell on 17 days in the month, amounting to 4^{in}·1, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·3 *greater* than the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 21 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Nov. 1	..	29·737	55·0	46·3	51·0	49·9	61·6	43·4	50·1	47·9	1·1	3·2	0·0	+ 4·6	E	Calm	0·0	0·0	0·0	10	50	0·01
2	In Equator.	29·848	55·1	46·3	50·4	48·4	62·0	46·0	50·6	48·4	2·0	6·0	0·0	+ 4·2	Calm	SW	0·0	0·0	0·0	35	98	0·00
3	..	29·919	57·0	43·8	49·9	47·3	69·0	41·8	50·6	49·1	2·6	8·4	0·9	+ 3·8	S	S	0·0	0·0	0·0	40	108	0·00
4	..	29·897	57·0	38·0	49·1	48·5	65·6	33·0	50·6	48·4	0·6	6·5	0·4	+ 3·2	SE	SSW	0·0	0·0	0·0	45	109	0·00
5	..	29·917	49·1	45·4	46·7	46·1	50·5	45·0	50·6	49·4	0·6	0·8	0·0	+ 1·0	NNE	NW	0·0	0·0	0·0	5	56	0·53
6	Full.	29·972	47·8	34·9	40·1	40·1	55·3	32·4	49·6	48·4	0·0	1·3	0·0	— 5·4	Calm	NE	0·0	0·0	0·0	40	105	0·11
7	..	30·140	44·0	35·1	38·6	37·9	56·0	34·1	50·1	48·4	0·7	1·8	0·0	— 6·5	NE	N	0·0	0·0	0·0	35	126	0·05
8	..	30·089	48·1	31·4	40·0	38·7	68·9	31·2	49·6	47·4	1·3	4·8	0·0	— 4·8	SW	SW	1·0	0·0	0·0	155	329	0·00
9	Greatest Declination N.	29·477	53·1	41·0	47·7	45·6	57·0	38·2	48·6	46·4	2·1	5·0	1·9	+ 3·2	SW	SW	12·0	0·0	3·0	185	394	0·13
10	Apogee.	29·243	49·8	35·1	39·9	36·2	79·8	33·1	48·6	46·4	3·7	11·8	1·4	— 4·4	SW	SW	10·0	0·0	1·8	125	277	0·05
11	..	29·420	39·9	28·9	33·3	30·0	43·5	25·0	48·6	45·4	3·3	9·0	2·0	—10·7	SW	N; W	1·5	0·0	0·0	55	135	0·00
12	..	29·871	43·0	27·0	35·1	30·7	76·1	23·5	46·6	44·4	4·4	9·7	2·4	— 8·8	W	N	3·0	0·0	0·0	45	140	0·00
13	..	29·898	40·4	25·5	31·6	28·0	49·0	25·5	46·6	43·4	3·6	6·5	1·3	—11·9	SW; Calm	Calm	0·0	0·0	0·0	5	39	0·00
14	Last Qr.	29·787	41·0	24·9	34·1	32·9	47·3	21·5	45·6	42·4	1·2	5·5	0·5	— 9·2	Calm	Calm; N	0·0	0·0	0·0	45	129	0·00
15	..	29·920	44·4	35·2	39·6	38·9	48·5	31·4	45·6	42·4	0·7	3·5	0·4	— 3·4	NNE	NNE	8·0	0·0	1·0	135	329	0·01
16	In Equator	30·038	47·0	37·8	42·5	38·3	79·0	36·3	44·6	42·4	4·2	9·2	2·0	— 0·1	NNE	N	4·0	0·0	1·0	120	282	0·00
17	..	30·234	47·1	34·1	39·1	35·4	75·4	27·8	43·6	41·4	3·7	9·5	1·3	— 3·3	NNE	NNE	3·0	0·0	0·3	75	180	0·00
18	..	30·161	47·3	32·1	39·3	36·1	76·6	25·5	43·6	41·4	3·2	9·9	2·4	— 2·9	NE	NE	5·0	0·0	0·0	90	222	0·00
19	..	30·003	41·6	37·7	38·8	36·2	43·6	37·2	42·6	41·4	2·6	6·9	1·5	— 3·4	NE	NE	4·0	0·0	0·3	80	225	0·01
20	..	30·039	42·0	31·0	36·6	33·4	61·4	25·1	42·6	40·4	3·2	9·5	0·0	— 5·6	ENE	NE	3·0	0·0	0·1	40	135	0·00
21	New.	29·997	41·0	33·0	36·7	35·8	43·8	32·4	42·1	39·9	0·9	1·8	0·7	— 5·3	NE	Calm	0·0	0·0	0·0	40	119	0·02
22	Perigee; Greatest Dec. S.	29·728	42·6	30·6	35·3	29·7	65·5	27·4	42·6	40·4	5·6	9·9	0·3	— 6·4	NW	NNW	0·0	0·0	0·0	65	163	0·00
23	..	29·601	36·5	24·8	29·5	24·6	41·0	18·0	41·6	39·4	4·9	6·4	3·2	—11·9	WSW	Calm	0·0	0·0	0·0	20	78	0·00
24	..	29·612	41·0	26·1	33·9	29·8	66·3	19·0	41·6	38·9	4·1	7·8	3·8	— 7·1	NE	NE	2·0	0·0	0·0	105	242	0·00
25	..	29·574	40·5	32·2	36·6	30·7	67·3	27·8	41·6	38·4	5·9	7·8	0·0	— 4·2	NE	NE	8·0	0·0	2·0	150	337	0·00
26	..	29·402	41·2	36·4	38·8	37·0	43·1	35·2	41·1	38·4	1·8	4·1	1·0	— 2·1	N by E	N; W	2·0	0·0	0·2	80	186	0·00
27	..	29·431	47·2	31·0	39·6	39·2	69·7	27·1	40·6	38·4	0·4	4·8	0·0	— 1·5	SW by S	SSW	0·0	0·0	0·0	120	235	0·10
28	First Qr.	29·643	51·5	35·5	42·9	42·2	72·3	29·8	40·6	38·4	0·7	4·2	0·0	+ 1·4	SSE	SE	2·0	0·0	0·2	85	187	0·00
29	In Equator	29·514	42·0	34·9	38·3	35·7	50·0	34·0	40·6	38·4	2·6	4·1	0·0	— 3·3	ENE; SE	SW	0·0	0·0	0·0	15	61	0·00
30	..	29·658	42·2	33·7	37·7	37·4	43·0	28·0	41·1	38·9	0·3	2·1	0·0	— 3·9	Var.	SE	0·0	0·0	0·0	20	78	0·00
Means	..	29·792	45·8	34·3	39·8	37·4	59·6	31·2	45·4	43·2	2·4	6·1	0·9	— 3·5	...	...	..	..	..	Sum 2065	Sum 5154	Sum 1·02

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $29^{in}\cdot943$ on the 3rd; the first minimum in the month was $29^{in}\cdot883$ on the 4th.
The second maximum .. was $30^{in}\cdot209$ on the 7th; the absolute minimum ,, was $29^{in}\cdot227$ on the 10th.
The third maximum .. was $29^{in}\cdot979$ on the 12th; the third minimum ,, was $29^{in}\cdot771$ on the 14th.
The absolute maximum ,, was $30^{in}\cdot248$ on the 17th; the fourth minimum .. was $29^{in}\cdot321$ on the 27th.
The fifth maximum ,, was $29^{in}\cdot663$ on the 28th; the fifth minimum .. was $29^{in}\cdot489$ on the 29th.
The sixth maximum ,, was $29^{in}\cdot679$ on the 30th.
The range in the month was $1^{in}\cdot021$.
The mean for the month was $29^{in}\cdot792$, being $0^{in}\cdot045$ *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 57°·0 on the 3rd and 4th; the lowest was 24°·8 on the 23rd; and the range in the month was 32°·2.
The mean .. of all the highest daily readings was 45°·8, being 3°·4 *lower* than the average of the preceding 21 years.
The mean ,, of all the lowest daily readings was 34°·3, being 3°·2 *lower* than the average of the preceding 21 years.
The mean daily range was 11°·5, being 0°·2 *less* than the average of the preceding 21 years.
The mean for the month was 39°·8, being 4°·4 *lower* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Nov. 1	ss, sps : m	ss, sps : m	10, th.-r	10
2	m	m : s, sps	10, th.-r, glm.	10, cu.-s, ci.-s
3	v	v	10	10, s, ci.-s : 0
4	v	v	10	7, ci.-s, ci : 10, ci.-s
5	w N : v	v	10, r	10, r, f : 10 : 3 li.-cl. f
6	m	m	10, f	10, h.-r : 10, th.-r
7	w	w	10, r	10, ci.-s : f
8	s	s	10, f	10
9	o	o : w	10, r	10, h.-r : 10
10	m : o	s N : s	10, ci.-s	10, oc.-shs : 7, ci.-s, ci
11	s, sps : s	s	7, ci.-s, ci, h.-f	7, ci, h, h.-f : f
12	s	s : ss, sps	0, h.-f	0 : h.-f
13	ss, sps	s : ss, sps	0, h.-f	0, h : th.-f
14	v	v	10, ci.-s, f, h.-f	10, ci.-s, f : 7, ci.-s
15	w	w : s	10, ci.-s	10, ci.-s, th.-r
16	s	s	8, ci.-cu, cu.-s, ci.-s	0 : 10, oc.-r
17	s	s	0	0
18	v	v	10	10, ci.-cu, cu.-s
19	w	w	10, r	10 : 10, h
20	m	m	10, ci.-s, ci, h.-f : 10, ci.-s, s	10, ci.-s
21	s	m	10, gt.-glm. r	10 : 10, f
22	m	m	8, cu, ci.-cu, cu.-s	8, ci.-s, ci : 0, f
23	s	s	0, f, h.-f	0, f, h.-f
24	s	m : s, sps	10, ci.-s, h.-f	2, ci : 5, s, ci.-s
25	o	o	2, ci, h.-f	10, ci.-s, ci
26	o : w	w : o : w	10	10
27	o	s : ss, sps	10, r	3, ci.-cu, ci : 0
28	m	m	5, ci.-cu	10, cu, ci.-cu, ci : 10
29	o	o : w	10, ci.-s	10 : 0, f
30	s	s	10 : 10, f	10 : 10, th.-f : 10, f

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 52°·6 on the 1st; and the lowest was 21°·1 on the 23rd.

The mean ,, was 37°·4, being 2°·6 *lower* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·224, being 0^{in}·029 *less* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·5, being 0^{gr}·4 *less* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 92 (that of Saturation being represented by 100), being 3 *greater* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 553 grains, being 6 grains *greater* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·3.

WIND.

The proportions were of N. 11, S. 7, W. 6, and E. 6. The greatest pressure in the month was 12^{lbs}·0 on the square foot on the 9th.

RAIN.

Fell on 10 days in the month, amounting to 1^{in}·0 as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·4 *less* than the average fall of the preceding 47 years.

MONTH and DAY, 1862.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Wheewell's Amount of Horizontal Movement of the Air on each Day.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	miles.	in.
Dec. 1	..	29·470	45·7	36·2	41·4	41·3	53·5	30·4	40·6	38·4	0·1	1·1	0·0	− 0·3	SE	ESE	1·0	0·0	0·0	85	189	0·05
2	..	29·448	46·2	35·5	40·7	39·2	70·9	29·8	40·6	39·4	1·5	5·0	0·5	− 1·1	ESE	ESE; SSE	0·0	0·0	0·0	80	170	0·00
3	..	29·564	48·7	38·3	44·3	42·8	67·1	33·2	41·1	38·9	1·5	5·2	0·9	+ 2·6	SSE	SE	2·0	0·0	0·1	90	189	0·00
4	..	29·702	49·5	42·1	45·9	45·8	51·8	41·2	41·6	39·4	0·1	0·8	0·0	+ 4·4	SE; E	SE; S	0·0	0·0	0·0	65	135	0·04
5	..	29·864	54·5	45·1	50·2	47·9	69·0	41·1	43·6	40·4	2·3	5·8	1·1	+ 8·8	S	S; SW	3·5	0·0	0·4	170	341	0·03
6	Full; Greatest Dec. N.	29·823	56·0	50·4	53·5	51·1	59·0	47·7	44·6	41·9	2·4	5·2	1·4	+12·4	SW	SW	7·0	0·0	1·6	210	433	0·12
7	Apogee	29·886	57·1	47·3	51·7	47·8	77·0	42·2	44·6	41·4	3·9	8·2	0·0	+11·0	WSW	WSW	3·0	0·0	0·3	135	309	0·00
8	..	29·927	44·7	39·8	42·2	35·2	56·1	34·4	47·6	42·4	7·0	9·2	4·6	+ 1·6	W; NW	W	6·0	0·0	1·0	155	359	0·27
9	..	29·884	48·0	39·0	44·3	41·1	50·3	35·2	48·1	42·9	3·2	8·2	1·1	+ 3·8	W; WSW	SW	1·8	0·0	0·1	180	367	0·04
10	..	29·664	53·0	38·7	46·5	41·9	67·0	32·0	47·1	43·4	4·6	9·4	1·2	+ 6·1	SW; W	WNW; W	4·0	0·0	0·5	145	303	0·22
11	..	29·738	49·7	35·4	43·5	41·3	56·6	29·1	46·6	43·4	2·2	6·5	1·1	+ 3·3	WSW; SW	SW; N	2·2	0·0	0·3	135	296	0·14
12	..	30·140	43·0	33·7	38·3	33·9	51·7	27·6	46·6	43·4	4·4	8·8	0·0	− 1·7	NW; W	W; SW	1·8	0·0	0·2	135	319	0·00
13	..	29·850	46·7	34·8	42·1	41·9	47·0	30·1	47·1	43·4	0·2	1·5	0·0	+ 2·5	SW	SW; W	7·0	0·0	1·2	135	286	0·14
14	In Equator; Last Quarter	30·245	45·3	33·7	39·0	36·1	64·9	27·6	45·6	42·4	2·9	5·7	0·5	− 0·7	WSW	SW	0·0	0·0	0·0	105	215	0·00
15	..	30·228	43·0	33·9	38·7	35·5	45·5	28·2	44·6	41·4	3·2	7·5	0·3	− 1·3	SSW	S	0·0	0·0	0·0	75	166	0·00
16	..	30·190	47·2	34·3	41·7	39·6	47·2	30·2	43·6	40·4	2·1	3·6	1·8	+ 1·4	SW	SW	0·0	0·0	0·0	165	345	0·00
17	..	30·137	52·0	38·7	45·6	44·1	54·6	35·0	43·6	39·9	1·5	3·2	0·0	+ 5·5	SW	SW; N	2·5	0·0	0·2	110	267	0·13
18	..	30·026	51·8	33·9	43·4	42·3	51·8	29·2	43·6	40·4	1·1	4·4	0·4	+ 3·5	SW	WSW	7·0	0·0	1·0	245	532	0·09
19	..	29·600	49·0	43·3	46·2	36·2	56·9	40·0	43·6	40·4	10·0	13·5	7·4	+ 6·7	NW	W	12·0	3·0	4·6	220	534	0·00
20	Greatest Declination S. Perigee; New.	29·413	44·0	36·5	40·2	30·8	54·5	29·3	42·6	41·4	9·4	12·1	7·4	+ 1·2	WNW	NNW	17·0	2·0	6·2	270	631	0·00
21		29·762	40·5	35·5	38·5	30·8	45·3	29·5	42·6	40·4	7·7	10·1	4·1	+ 0·1	NNW	N	15·0	3·0	7·4	210	531	0·02
22	..	29·994	40·2	33·4	36·4	32·8	43·3	33·0	41·6	39·4	3·6	6·9	0·0	− 1·5	N	N; SW	4·0	0·0	0·5	75	196	0·02
23	..	29·945	45·5	33·9	40·5	40·5	46·0	33·5	41·1	39·9	0·0	1·9	0·0	+ 3·1	SW	N; WSW	0·0	0·0	0·0	40	132	0·04
24	..	30·099	46·0	36·8	42·8	41·6	46·0	30·5	41·6	38·4	1·2	5·0	0·0	+ 5·8	W	WSW	1·0	0·0	0·0	..	320	0·00
25	..	30·231	50·0	40·9	45·4	40·1	53·5	38·0	41·6	38·9	5·3	8·6	3·7	+ 8·9	WSW	W	2·5	0·0	0·2	..	506	0·00
26	In Equator	30·137	50·0	45·0	47·0	39·7	57·0	38·0	43·6	39·4	7·3	8·2	3·0	+10·6	W	W	5·0	0·0	1·5	..	231	0·00
27	First Qr.	30·209	49·5	38·8	44·8	44·5	50·2	30·5	43·6	39·4	0·3	1·9	0·0	+ 8·3	SW	SW	2·0	0·0	0·2	..	400	0·01
28	..	29·886	52·0	45·4	48·2	42·3	78·5	41·0	42·6	39·4	5·9	10·0	2·9	+11·2	SW	SW	3·0	0·0	0·6	..	406	0·00
29	..	29·348	49·2	42·8	46·1	44·1	53·0	42·8	42·6	39·4	2·0	5·5	1·3	+ 8·8	SW	SW	8·0	0·0	1·0	..	344	0·25
30	..	29·387	45·5	38·4	42·0	38·8	56·0	31·8	43·6	41·4	3·2	7·0	1·7	+ 4·6	SW; W	NW	1·0	0·0	0·0	..	250	0·02
31	..	30·011	44·7	33·5	39·7	36·0	60·9	29·9	43·6	41·4	3·7	8·8	1·5	+ 2·7	NW; SW	SW	1·0	0·0	0·0	..	356	0·00
Means	..	29·865	48·0	38·6	43·6	40·2	56·2	33·9	43·7	40·7	3·4	6·4	1·5	+ 4·3	...	...	..	..	..	Sum 3235	Sum 10058	Sum 1·63

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month	was 29in·890 on the 5th;	the first minimum in the month	was 29in·427 on the 2nd.
The second maximum ,,	was 30in·001 on the 8th;	the second minimum ,,	was 29in·791 on the 6th.
The third maximum ,,	was 29in·817 on the 11th;	the third minimum ,,	was 29in·547 on the 10th.
The fourth maximum ,,	was 30in·199 on the 12th;	the fourth minimum ,,	was 29in·680 on the 11th.
The fifth maximum ,,	was 30in·269 on the 14th;	the fifth minimum ,,	was 29in·787 on the 13th.
The sixth maximum ,,	was 30in·017 on the 22nd;	the sixth minimum ,,	was 29in·373 on the 20th.
The absolute maximum ,,	was 30in·325 on the 25th;	the seventh minimum ,,	was 29in·889 on the 23rd.
The eighth maximum ,,	was 30in·273 on the 27th;	the eighth minimum ,,	was 30in·099 on the 26th.
The ninth maximum ,,	was 30in·047 on the 31st.	the absolute minimum ,,	was 29in·310 on the 29th.

The range in the month was 1in·015.

The mean for the month was 29in·865, being 0in·052 *higher* than the average of the preceding 21 years.

TEMPERATURE OF THE AIR.

The highest in the month was 57°·1 on the 7th; the lowest was 33°·4 on the 22nd; and the range in the month was 23°·7.

The mean ,, of all the highest daily readings was 48°·0, being 3°·0 *higher* than the average of the preceding 21 years.

The mean ,, of all the lowest daily readings was 38°·6, being 3°·1 *higher* than the average of the preceding 21 years.

The mean daily range was 9°·4, being 0°·1 *less* than the average of the preceding 21 years.

The mean for the month was 43°·6 being 3°·5 *higher* than the average of the preceding 21 years.

MONTH and DAY, 1862.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Dec. 1	s : s N, s P, sps, g cur	s	10, f : 10, shs.-r	10, ci.-s : 0
2	s	s	3, ci.-s, ci	3, ci : 10
3	v	v	0	10, ci.-s, ci : 10, oc.-r
4	w	w	10, r	10
5	w	w	10, ci.-cu, cu.-s, ci.-s	10, ci.-s : oc.-r : 10, ci.-s
6	w	s : 0	10, th.-r	10, r
7	w	w : s	10, ci.-s	10, ci.-cu, ci.-s : r
8	0	0	0	10
9	s	s	10, ci.-cu, ci.-s	10, ci.-s : 10, r : 10, ci.-s
10	0	w : s, sps	10, ci.-s	0
11	s	s	0	10, ci.-s : r
12	s	s : 0	3, h.-f, h	3, ci, h : 0
13	0	0 : s	10, oc.-r	10, r : 0
14	s	s	0, h.-f	0 : a
15	s	s	10, ci.-s	10 : 0
16	s	s	7, ci.-cu, ci.-s	10
17	v	v	10 : 10, r	10, r : 0 : 10
18	s	s N : 0	4, li.-cl : 9, ci.-s, ci : 10, r	10, r : 10
19	0	0	10, ci.-s, sc	10, cu, ci.-s
20	0	0	4, ci.-cu, ci	10, ci.-s, ci
21	0	0	8, cu, cu.-s, ci.-s	8, ci.-s : 10, r
22	0	s	7, li.-cl, h	10 : 10, r
23	0	m	10, th.-r, f	10, oc.-r, f : 10, ci.-s, f
24	s	s	10	10, ci.-s
25	0	0	0, h	3, cu, ci.-s : 0
26	0	0 : m	10, ci.-cu, ci.-s	10, cu.-s, ci.-s, sc : 10, ci.-s
27	s	s	3, ci.-cu, ci	10, th.-r
28	w	w	9, ci.-cu, ci	9, ci.-cu, ci.-s : 10
29	s N	s	10, r	10, r : 7, ci.-s, lu.-ha
30	v	v	0	10, cu, ci.-cu, ci.-s
31	m	m	0, h	0 : 10, cu.-s, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 52°·7 on the 6th ; and the lowest was 29°·0 on the 21st.

The mean ,, was 40°·2, being 3°·3 *higher* than the average of the preceding 21 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·249, being 0^{in}·028 *greater* than the average of the preceding 21 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·8, being 0^{gr}·2 *greater* than the average of the preceding 21 years.

Degree of Humidity.—The mean for the month was 88 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 21 years.

Weight of a Cubic Foot of Air.—The mean for the month was 550 grains, being 2 grains *less* than the average of the preceding 21 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·5.

WIND.

The proportions were of N. 4, S. 10, W. 15, and E. 2. The greatest pressure in the month was 17^{lbs}·0 on the square foot on the 20th.

RAIN.

Fell on 17 days in the month, amounting to 1^{in}·6, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·3 *less* than the average fall of the preceding 47 years.

MAXIMA AND MINIMA READINGS OF THE BAROMETER.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° Fahrenheit, extracted from the photographic records. The readings are accurate; but the times are liable to great uncertainty, as the surface of the quicksilver frequently remains at its highest or lowest point through several hours. The time given is the middle of the stationary period. Where the symbol : follows the time, it denotes that the quicksilver has been sensibly stationary through a period of more than one hour.

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
January	1. 22. 5	30·305	January	4. 21. 0:	29·595	May	2. 10. 30:	30·120	May	3. 23. 18:	29·577
	6. 8. 51:	30·025		8. 0. 0	29·509		5. 21. 45:	29·930		7. 0. 0	29·594
	8. 10. 37:	29·703		9. 7. 0:	29·503		8. 0. 40:	29·794		9. 9. 0	29·404
	10. 9. 37:	29·678		11. 1. 3	29·162		14. 10. 2:	29·788		15. 7. 43:	29·671
	11. 17. 0	29·630		12. 8. 48:	29·446		17. 14. 35:	30·010		21. 3. 29	29·320
	12. 23. 15:	29·611		13. 20. 16	29·380		25. 14. 30:	29·982		30. 0. 0	29·319
	17. 22. 11:	29·997		21. 20. 10:	29·283	June	3. 21. 23	30·035	June	6. 13. 29:	29·444
	22. 21. 11:	29·524		23. 13. 51:	29·283		8. 15. 18:	29·900		12. 7. 12:	29·078
	26. 11. 0:	30·155		30. 13. 40:	29·482		16. 20. 19:	29·942		17. 17. 7:	29·710
February	3. 23. 32	30·088	February	5. 19. 13	29·808		18. 15. 8:	29·974		21. 14. 12:	29·569
	8. 9. 0	30·495		12. 4. 6:	29·883		25. 10. 7:	30·024		27. 5. 48:	29·590
	14. 23. 19:	30·016		17. 21. 40:	29·201		28. 15. 48:	29·851	July	6. 0. 26:	29·316
	20. 20. 33:	29·816		21. 17. 14:	29·542	July	8. 11. 45:	29·945		10. 1. 53:	29·586
	23. 10. 21:	30·066		24. 13. 38:	29·878		10. 22. 23:	29·771		12. 4. 58:	29·294
	25. 23. 30	30·214	March	2. 21. 44	29·065		13. 9. 0	29·747		15. 23. 37:	29·588
March	4. 19. 23	29·812		6. 19. 38:	29·276		21. 11. 27:	30·098		23. 4. 10:	29·765
	7. 20. 38:	29·542		8. 8. 54	29·288		25. 12. 20:	30·013		26. 11. 30:	29·851
	10. 9. 4:	29·933		11. 21. 0:	29·538		27. 21. 0	29·990	August	2. 5. 47:	29·805
	13. 22. 41:	30·023		20. 9. 0	29·151	August	3. 10. 30:	29·936		5. 11. 51:	29·496
	22. 9. 0	29·904		28. 14. 17:	29·034		6. 0. 45	29·651		7. 0. 30	29·183
April	1. 0. 53:	29·747	April	2. 18. 43	29·410		11. 10. 20:	30·033		14. 4. 41:	29·590
	4. 10. 9:	29·970		5. 18. 7:	29·783		19. 22. 10:	29·867		21. 17. 32:	29·704
	7. 19. 28	30·121		9. 21. 11	29·776		24. 9. 47:	30·160		26. 5. 32:	29·738
	11. 21. 8	30·136		14. 13. 4:	29·810		29. 10. 35:	30·002	September	2. 15. 23:	29·420
	15. 13. 52:	30·073		19. 4. 55:	29·675	September	7. 22. 3:	29·975		9. 18. 17:	29·770
	20. 11. 26:	29·873		22. 12. 20:	29·402		11. 11. 0:	30·031		13. 22. 18:	29·643
	23. 20. 49:	29·900		25. 2. 41	29·695		17. 21. 0:	30·267		24. 14. 58:	29·661
	28. 19. 38	30·148	May	0. 21. 41	29·765		27. 20. 53:	29·791		29. 10. 42:	29·575

MAXIMA AND MINIMA READINGS OF THE BAROMETER—*concluded.*

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.	Approximate Mean Solar Time, 1862.		Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
October	4. 0. 0	30·307	October	6. 9. 0	29·815	November	17. 9. 25	30·256	November	13. 22. 3:	29·771
	8. 9. 0	30·202		12. 5. 45:	29·463		28. 10. 28:	29·663		26. 20. 13:	29·321
	14. 1. 34:	29·756		15. 0. 0	29·492		29. 23. 48:	29·679		29. 1. 49	29·480
	16. 6. 39:	29·952		17. 0. 0	29·420	December	4. 21. 0:	29·890	December	2. 1. 6	29·406
	17. 9. 0	29·545		18. 3. 0	29·298		8. 13. 6:	30·030		6. 5. 57:	29·791
	18. 21. 0	29·599		19. 9. 0	28·958		10. 13. 10:	29·840		9. 18. 29:	29·520
	21. 9. 46:	29·755		23. 0. 25:	29·083		12. 6. 25:	30·210		11. 6. 30:	29·678
	24. 22. 23	29·805		25. 22. 0	29·442		14. 9. 0	30·269		13. 1. 44	29·756
	26. 22 22:	29·816		28. 2. 31	29·650		21. 23. 17:	30·026		20. 0. 9	29·363
	29. 10. 29:	29·823		30. 19. 20:	29·560		25. 9. 50:	30·325		22. 18. 26:	29·867
November	2. 21. 10	29·943	November	4. 2. 49:	29·877		26. 21. 50:	30·294		26. 1. 8	30·083
	7. 10. 9:	30·226		9. 20. 18:	29·227		31. 7. 50:	30·047		29. 3. 0	29·310
	12. 15. 0:	30·006									

MONTHLY MEANS of RESULTS for METEOROLOGICAL ELEMENTS at the ROYAL OBSERVATORY, GREENWICH, in the Year 1862.

1862, MONTH.	Mean Reading of the Barometer.	TEMPERATURE OF THE AIR.							Mean Temperature of Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required to saturate a Cubic Foot of Air.
		Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Mean Temperature.				
	in.	°	°	°	°	°	°	°	°	in.	gr.	gr.
January ..	29·705	55·0	20·4	34·6	43·9	34·3	9·6	39·0	34·6	0·200	2·3	0·5
February..	29·905	56·3	24·4	31·9	46·5	36·7	9·8	41·1	36·6	0·217	2·5	0·5
March	29·498	63·6	22·5	41·1	50·0	38·4	11·6	43·1	39·5	0·242	2·8	0·4
April	29·847	75·0	26·7	48·3	57·5	41·7	15·8	48·4	43·0	0·277	3·1	0·8
May	29·726	81·5	37·8	43·7	66·4	47·9	18·5	55·4	50·3	0·365	4·0	0·9
June	29·718	73·5	43·4	30·1	67·1	49·3	17·8	56·3	49·3	0·352	4·0	1·1
July.....	29·762	79·0	44·6	34·4	70·8	50·8	20·0	59·1	52·4	0·394	4·5	1·2
August ...	29·785	79·9	44·7	35·2	71·0	51·4	19·6	59·5	53·5	0·410	4·6	1·1
September.	29·859	73·8	39·2	34·6	67·6	50·1	17·5	57·7	52·5	0·396	4·4	0·9
October...	29·726	71·7	28·5	43·2	60·5	45·6	14·9	51·8	48·6	0·343	3·8	0·5
November .	29·793	57·0	24·8	32·2	45·8	34·3	11·5	39·8	37·4	0·224	2·5	0·3
December .	29·865	57·1	33·4	23·7	48·0	38·6	9·4	43·6	40·2	0·249	2·8	0·4
Means	29·766	68·6	32·5	36·1	57·9	43·3	14·6	49·6	44·9	0·306	3·4	0·7

1862, MONTH.	Mean Degree of Humidity. (Sat. = 100.)	Mean Weight of a Cubic Foot of Air.	Mean Amount of Cloud. 0–10	RAIN.			WIND.											
				Number of Rainy Days.	Amount collected on the Ground.		From Osler's Anemometer.										From Whewell's Anemometer.	From Robinson's Anemometer.
					Gauge read daily.	Gauge read Monthly.	Number of Days for Mean Direction of the Wind referred to different Points of Azimuth.								Number of Calm Days and Days on which the Pressure of the Wind was less than ½ lb. on the Sq. Foot.	Mean Daily Pressure in lbs. on Square Foot.	Mean Daily Horizontal Movement of Wind in Miles.	
							N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
		gr.			in.	in.												
January....	85	552	7·8	17	1·8	1·9	1	3	2	5	3	10	5	2	0	0·50	125	256
February..	84	553	8·5	6	0·5	0·5	3	3	4	6	2	3	5	1	1	0·41	107	229
March	86	544	8·9	21	3·5	3·7	2	7	3	2	1	12	2	1	1	0·41	99	237
April	81	545	7·3	13	2·8	2·8	1	7	0	3	0	12	5	2	0	0·32	121	270
May	84	534	8·3	16	2·8	2·8	0	4	3	3	1	9	7	3	1	0·09	97	218
June.....	77	533	7·8	17	1·9	1·8	3	1	0	1	1	10	9	4	1	0·21	123	268
July.....	78	531	7·2	12	1·7	1·6	2	0	0	1	1	13	12	2	0	0·37	118	261
August ...	81	530	6·9	11	3·0	3·0	3	5	1	2	0	10	6	2	2	0·29	69	193
September.	83	534	7·7	12	1·6	1·6	1	8	3	2	2	10	2	1	1	0·20	54	173
October...	89	538	7·1	17	4·1	4·0	2	3	2	2	1	12	7	1	1	1·28	127	288
November .	92	553	7·3	10	1·0	1·1	7	5	2	1	3	5	3	0	4	0·33	69	172
December .	88	550	7·5	17	1·6	1·7	2	0	0	4	2	12	8	3	0	0·94	141	324
Means	84	541	7·7	Sum 169	Sum 26·3	Sum 26·5	Sum 27	Sum 46	Sum 20	Sum 32	Sum 17	Sum 118	Sum 71	Sum 22	Sum 12	..	..	..

READINGS OF THERMOMETERS SUNK IN THE GROUND.

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day, except Sundays, Good Friday, and Christmas Day.

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	51·38	50·80	50·02	49·25	48·75	S	48·92	49·57	50·25	50·96	51·57	51·79
2	51·40	S	S	49·25	48·72	48·58	48·94	49·57	50·29	50·97	S	51·78
3	51·36	50·75	49·95	49·21	48·68	48·60	48·94	S	50·30	51·05	51·60	51·80
4	51·35	50·72	49·93	49·21	S	48·61	48·97	49·62	50·34	51·04	51·62	51·79
5	S	50·71	49·95	49·18	48·70	48·60	49·00	49·65	50·36	S	51·60	51·81
6	51·30	50·65	49·93	S	48·71	48·61	S	49·65	50·39	51·11	51·60	51·82
7	51·31	50·60	49·90	49·18	48·66	48·62	49·03	49·68	S	51·10	51·60	S
8	51·30	50·57	49·90	49·08	48·65	S	49·06	49·68	50·44	51·14	51·65	51·76
9	51·32	S	S	49·09	48·65	48·64	49·07	49·70	50·49	51·17	S	51·76
10	51·23	50·52	49·80	49·04	48·64	48·65	49·09	S	50·47	51·19	51·65	51·78
11	51·25	50·50	49·80	49·00	S	48·66	49·10	49·76	50·50	51·20	51·65	51·75
12	S	50·48	49·78	48·96	48·61	48·65	49·12	49·79	50·54	S	51·68	51·72
13	51·18	50·46	49·75	S	48·60	48·67	S	49·81	50·57	51·23	51·66	51·72
14	51·18	50·44	49·70	48·92	48·60	48·66	49·18	49·82	S	51·27	51·68	S
15	51·16	50·40	49·70	48·90	48·58	S	49·19	49·84	50·63	51·30	51·71	51·70
16	51·10	S	S	48·90	48·58	48·70	49·20	49·86	50·64	51·29	S	51·70
17	51·09	50·35	49·63	48·88	48·60	48·73	49·22	S	50·65	51·30	51·74	51·71
18	51·05	50·32	49·62	Good Friday.	S	48·73	49·25	49·90	50·69	51·30	51·74	51·78
19	S	50·31	49·60	48·86	48·59	48·74	49·27	49·95	50·72	S	51·74	51·66
20	51·00	50·30	49·55	S	48·57	48·75	S	49·97	50·74	51·34	51·75	51·64
21	51·00	50·27	49·51	48·83	48·55	48·76	49·31	50·00	S	51·37	51·75	S
22	51·00	50·25	49·52	48·82	48·55	S	49·35	50·00	50·77	51·40	51·75	51·60
23	51·00	S	S	48·80	48·55	48·79	49·34	50·04	50·79	51·41	S	51·60
24	51·00	50·18	49·46	48·79	48·57	48·81	49·37	S	50·82	51·41	51·75	51·60
25	50·95	50·12	49·46	48·76	S	48·80	49·40	50·10	50·84	51·43	51·76	Christmas Day.
26	S	50·10	49·42	48·80	48·57	48·85	49·44	50·13	50·88	S	51·76	51·52
27	50·90	50·08	49·40	S	48·56	48·85	S	50·15	50·90	51·47	51·78	51·54
28	50·86	50·05	49·37	48·78	48·57	48·90	49·47	50·16	S	51·49	51·80	S
29	50·86		49·35	48·75	48·57	S	49·50	50·19	50·95	51·48	51·78	51·51
30	50·86		S	48·74	48·56	48·89	49·51	50·21	50·97	51·47	S	51·47
31	50·82		49·30		48·57		49·54	S		51·54		51·45
Means.	51·12	50·41	49·67	48·96	48·61	48·71	49·21	49·88	50·61	51·28	51·70	51·68

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times.

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	49·73	47·60	46·62	46·20	47·01	S	51·42	53·00	54·60	55·15	54·65	52·02
2	49·70	S	S	46·23	47·03	49·25	51·36	53·05	54·63	55·12	S	51·91
3	49·70	47·48	46·60	46·22	47·05	49·32	51·40	S	54·65	55·23	54·54	51·80
4	49·53	47·40	46·58	46·22	S	49·39	51·48	53·15	54·71	55·17	54·47	51·68
5	S	47·30	46·60	46·22	47·19	49·44	51·52	53·27	54·75	S	54·35	51·60
6	49·35	47·27	46·58	S	47·28	49·50	S	53·30	54·80	55·22	54·25	51·50
7	49·35	47·21	46·58	46·32	47·34	49·60	51·60	53·38	S	55·14	54·19	S
8	49·21	47·12	46·60	46·30	47·35	S	51·68	53·40	54·89	55·17	54·15	51·22
9	49·18	S	S	46·30	47·45	49·75	51·70	53·50	54·95	55·19	S	51·13
10	49·10	47·12	46·45	46·40	47·55	49·83	51·74	S	54·88	55·20	54·10	51·06
11	49·04	47·10	46·47	46·40	S	49·90	51·76	53·65	54·73	55·17	53·87	50·95
12	S	47·10	46·46	46·50	47·68	49·95	51·84	53·75	55·00	S	53·85	50·82

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12 French feet—*concluded.*

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	48·82	47·10	46·38	*S*	47·75	50·07	*S*	53·82	55·04	55·13	53·73	50·80
14	48·78	47·08	46·32	46·51	47·85	50·14	51·96	53·88	*S*	55·15	53·69	*S*
15	48·68	47·06	46·32	46·56	47·90	*S*	52·00	53·93	55·10	55·18	53·64	50·64
16	48·56	*S*	*S*	46·61	48·00	50·34	52·04	54·03	55·07	55·13	*S*	50·57
17	48·50	47·02	46·30	46·70	48·15	50·64	52·09	*S*	55·07	55·09	53·51	50·56
18	48·40	46·93	46·30	Good Friday.	*S*	50·50	52·15	54·05	55·11	55·04	53·38	50·45
19	*S*	46·92	46·28	46·72	48·43	50·57	52·18	54·22	55·15	*S*	53·32	50·40
20	48·26	46·98	46·28	*S*	48·38	50·65	*S*	54·20	55·15	55·05	53·22	50·30
21	48·23	46·90	46·20	46·78	48·43	50·73	52·30	54·25	*S*	55·06	53·10	*S*
22	48·22	46·82	46·21	46·80	48·50	*S*	52·40	54·25	55·12	55·08	53·01	50·16
23	48·20	*S*	*S*	46·78	48·58	50·87	52·40	54·33	55·15	55·04	*S*	50·12
24	48·18	46·70	46·20	46·80	48·65	50·97	52·45	*S*	55·16	54·99	52·80	50·07
25	48·11	46·70	46·21	46·82	*S*	51·00	52·58	54·39	55·17	54·95	52·67	Christmas Day.
26	*S*	46·71	46·21	46·83	48·80	51·10	52·65	54·45	55·19	*S*	52·57	50·00
27	47·96	46·68	46·21	*S*	48·84	51·13	*S*	54·48	55·19	54·90	52·47	49·87
28	47·90	46·67	46·21	46·90	48·90	51·15	52·74	54·48	*S*	54·85	52·40	*S*
29	47·83		46·21	46·92	49·00	*S*	52·81	54·52	55·22	54·78	52·24	49·75
30	47·74		*S*	46·95	49·04	51·25	52·86	54·56	55·20	54·68	*S*	49·67
31	47·70		46·21		49·09		52·93	*S*		54·70		49·59
Means.	48·67	47·04	46·37	46·56	48·05	50·28	52·08	53·90	54·98	55·06	53·53	50·72

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times.

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	46·60	44·25	45·30	46·27	49·09	*S*	55·37	58·23	59·12	58·02	54·44	48·54
2	46·63	*S*	*S*	46·40	49·28	53·28	55·31	58·34	59·16	58·00	*S*	48·48
3	46·42	44·50	45·12	46·50	49·47	53·30	55·42	*S*	59·18	58·11	54·12	48·39
4	46·30	44·68	45·00	46·61	*S*	53·58	55·51	58·60	59·20	57·98	54·04	48·30
5	*S*	45·06	44·88	46·85	50·00	53·74	55·57	58·78	59·22	*S*	53·90	48·26
6	46·08	45·25	44·70	*S*	50·16	53·95	*S*	58·85	59·18	57·97	53·80	48·22
7	45·98	45·50	44·63	47·08	50·40	54·13	55·62	58·92	*S*	57·84	53·70	*S*
8	45·88	45·65	44·55	47·12	50·48	*S*	55·74	59·02	59·09	57·84	53·60	48·30
9	45·63	*S*	*S*	47·30	50·73	54·40	55·80	59·02	59·04	57·80	*S*	48·40
10	45·60	45·80	44·52	47·60	51·00	54·60	55·91	*S*	58·87	57·78	53·28	48·52
11	45·63	45·60	44·60	47·60	*S*	54·76	56·00	59·02	58·89	57·67	53·05	48·55
12	*S*	45·50	44·89	47·55	51·33	54·82	56·13	59·04	58·92	*S*	52·92	48·55
13	45·80	45·20	45·01	*S*	51·44	55·00	*S*	59·00	58·89	57·52	52·67	48·55
14	45·80	45·08	45·10	47·57	51·52	55·07	56·29	59·03	*S*	57·52	52·40	*S*
15	45·96	45·00	45·21	47·46	51·60	*S*	56·31	58·90	58·79	57·50	52·09	48·39
16	46·02	*S*	*S*	47·32	51·65	55·20	56·39	58·96	58·70	57·38	*S*	48·29
17	45·90	44·81	45·45	47·17	51·72	55·23	56·51	*S*	58·66	57·33	51·43	48·17
18	45·80	44·60	45·58	Good Friday	*S*	55·21	56·63	58·83	58·67	57·24	51·16	48·00
19	*S*	44·56	45·60	47·10	51·85	55·21	56·70	58·90	58·69	*S*	50·90	47·90
20	45·52	44·68	45·60	*S*	51·80	55·24	*S*	58·82	58·63	56·94	50·70	47·80
21	45·34	44·78	45·62	47·21	51·82	55·24	56·92	58·79	*S*	56·69	50·50	*S*
22	45·13	44·87	45·50	47·30	51·98	*S*	57·02	58·68	58·50	56·47	50·29	47·75
23	45·02	*S*	*S*	47·45	52·08	55·20	57·06	58·76	58·50	56·19	*S*	47·70
24	44·80	45·02	45·10	47·60	52·20	55·20	57·18	*S*	58·47	55·92	49·90	47·60
25	44·70	45·12	45·17	47·77	*S*	55·13	57·33	58·82	58·39	55·70	49·70	Christmas Day.
26	*S*	45·26	45·22	47·96	52·38	55·21	57·42	58·88	58·32	*S*	49·50	47·40

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6 French feet—*concluded.*

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
27	44·18	45·30	45·38	*S*	52·44	55·20	*S*	58·90	58·25	55·27	49·25	47·35
28	44·27	45·28	45·56	48·32	52·55	55·20	57·53	58·89	*S*	55·04	49·00	*S*
29	44·40		45·82	48·56	52·70	*S*	57·72	58·95	58·14	54·86	48·80	47·29
30	44·35		*S*	48·81	52·80	55·32	57·85	59·00	58·10	54·70	*S*	47·26
31	44·20		46·12		52·94		58·03	*S*		54·60		47·29
Means .	43·48	45·06	45·20	47·38	51·39	54·74	56·49	58·84	58·75	56·88	51·81	48·05

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at the same times.

Day of the Month. 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	41·40	42·21	42·12	46·10	51·40	*S*	57·50	62·22	61·53	59·02	51·32	43·80
2	41·42	*S*	*S*	46·25	51·98	55·43	57·50	62·40	61·39	58·58	*S*	43·89
3	41·40	43·30	41·65	46·60	52·32	56·88	57·60	*S*	61·25	58·53	51·70	43·85
4	41·46	44·10	41·17	47·10	*S*	57·30	57·55	62·78	61·05	58·59	51·79	44·00
5	*S*	44·48	40·63	47·21	52·23	57·36	57·45	62·77	60·68	*S*	51·60	44·37
6	41·18	44·70	40·18	*S*	52·85	57·50	*S*	62·82	60·40	58·43	51·50	44·93
7	40·97	44·68	40·60	47·50	53·68	57·60	58·10	62·75	*S*	58·26	51·10	*S*
8	40·90	44·10	41·67	47·60	54·10	*S*	58·45	62·30	60·18	58·13	50·68	46·15
9	41·10	*S*	*S*	47·60	54·00	58·22	58·61	61·88	60·20	57·89	*S*	46·40
10	41·68	42·40	43·10	47·09	53·90	58·24	58·80	*S*	60·26	57·83	49·80	46·10
11	42·30	41·81	43·60	47·11	*S*	58·27	58·78	61·28	60·37	57·68	49·45	46·15
12	*S*	41·24	43·60	47·02	53·70	58·25	58·60	61·24	59·90	*S*	48·65	45·87
13	43·07	41·22	44·08	*S*	53·50	58·20	*S*	61·23	59·56	57·68	47·61	45·40
14	43·02	41·21	44·12	45·89	53·30	57·88	58·80	61·30	*S*	57·49	46·80	*S*
15	42·96	41·21	44·20	45·49	53·00	*S*	59·20	61·33	59·94	57·54	46·11	44·59
16	42·70	*S*	*S*	45·28	52·70	57·53	59·46	61·28	59·87	57·65	*S*	44·18
17	42·28	41·28	44·21	45·10	52·70	57·48	59·53	*S*	59·95	57·24	45·90	44·00
18	41·60	41·16	44·20	Good Friday	*S*	57·40	59·50	60·60	59·83	56·63	45·80	44·28
19	*S*	41·54	44·08	45·90	53·38	57·35	59·60	60·48	59·65	*S*	45·80	44·30
20	40·22	42·21	44·02	*S*	53·82	57·18	*S*	60·36	59·59	54·39	45·57	44·54
21	39·80	42·92	43·73	47·06	54·20	56·97	59·88	60·60	*S*	54·81	45·14	*S*
22	39·50	43·10	42·92	47·46	54·20	*S*	60·19	60·82	59·51	53·52	45·00	44·15
23	39·48	*S*	*S*	47·88	53·92	56·68	60·19	61·14	59·31	53·49	*S*	43·82
24	39·35	43·81	42·33	48·11	54·08	56·85	60·14	*S*	58·91	53·26	44·25	43·70
25	39·88	43·80	43·20	48·60	*S*	56·98	60·10	60·93	58·63	52·60	43·70	Christmas Day
26	*S*	43·41	44·18	49·18	54·55	57·16	60·40	60·96	58·65	*S*	43·50	43·60
27	40·25	42·96	44·90	*S*	54·72	57·27	*S*	61·12	58·62	52·30	43·32	44·00
28	40·18	42·40	45·40	50·40	55·01	57·50	61·42	61·40	*S*	52·24	43·35	*S*
29	40·21		45·85	50·73	55·31	*S*	61·78	61·59	58·89	52·20	43·50	44·39
30	40·70		*S*	51·05	55·60	57·18	61·87	61·50	59·09	51·95	*S*	44·60
31	41·50		45·90		55·92		62·04	*S*		51·45		44·65
Means .	41·13	42·73	43·29	47·31	53·71	57·39	59·37	61·51	59·80	55·87	47·32	44·60

At temperatures below 39°·70 the fluid of this thermometer descends below the scale; the readings on those days, which are slightly below this value, are estimated readings only, and therefore liable to some uncertainty.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the case which covers the tops of the deep-sunk Thermometers, at the same times.

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	36·5	49·5	40·8	49·0	59·8	*S*	60·4	67·0	61·6	56·2	51·5	42·8
2	40·0	*S*	*S*	51·7	57·6	62·0	61·0	66·5	62·3	59·6	*S*	41·7
3	38·3	49·0	36·3	52·5	52·0	63·0	59·7	*S*	60·8	62·6	51·8	44·4
4	38·8	49·6	35·0	49·8	*S*	61·3	58·9	65·1	60·4	58·1	50·5	44·9
5	*S*	49·0	37·3	51·0	60·8	61·0	60·9	67·0	59·8	*S*	50·4	47·3
6	36·3	46·5	47·5	*S*	64·2	61·8	*S*	64·5	60·4	59·8	46·0	51·0
7	39·8	41·5	49·0	51·2	62·6	63·1	62·5	64·0	*S*	56·8	45·9	*S*
8	43·8	34·7	49·8	47·5	57·5	*S*	62·8	61·5	61·9	57·9	44·0	45·5
9	45·5	*S*	*S*	47·5	55·8	60·8	62·2	61·6	64·2	58·1	*S*	44·5
10	47·5	38·3	47·0	47·8	56·0	60·7	61·9	*S*	60·0	58·2	46·3	49·0
11	47·0	36·3	47·5	47·5	*S*	61·9	58·4	62·2	56·9	58·9	39·5	44·0
12	*S*	40·8	47·5	43·5	54·8	59·0	61·0	63·6	58·8	*S*	39·0	40·7
13	42·5	40·0	46·0	*S*	53·8	59·3	*S*	64·1	61·9	56·0	37·0	43·5
14	42·7	39·0	45·0	42·5	53·8	58·6	64·9	64·5	*S*	59·4	37·7	*S*
15	41·5	40·6	43·6	42·5	51·5	*S*	63·0	63·2	62·6	62·1	40·9	41·1
16	38·3	*S*	*S*	44·3	55·0	58·7	61·7	63·2	61·4	55·8	*S*	41·6
17	35·0	39·8	45·5	47·2	57·2	59·9	61·4	*S*	60·2	55·0	42·5	47·0
18	33·6	45·0	44·3	Good Friday.	*S*	58·2	63·0	59·6	59·3	51·6	41·0	42·9
19	*S*	46·8	43·2	51·8	60·8	57·5	62·6	62·1	61·7	*S*	42·0	45·5
20	33·0	48·1	41·8	*S*	61·2	58·3	*S*	62·6	61·5	50·5	40·0	42·3
21	34·6	46·3	40·2	53·5	56·0	57·4	63·4	64·9	*S*	47·0	40·4	*S*
22	39·0	47·5	40·6	54·0	54·1	*S*	63·3	62·1	58·8	53·4	40·0	40·3
23	38·8	*S*	*S*	52·2	56·5	58·3	61·7	62·9	57·0	51·3	*S*	41·5
24	44·0	43·5	48·0	53·0	59·2	60·4	61·8	*S*	58·5	47·3	37·0	42·5
25	43·5	42·1	61·5	58·0	*S*	59·5	64·5	62·6	60·1	47·0	37·5	Christmas Day
26	*S*	39·3	50·7	57·5	58·7	61·6	66·8	64·2	60·8	*S*	40·5	43·0
27	40·0	38·3	50·2	*S*	58·7	59·8	*S*	65·0	61·0	50·5	41·5	43·5
28	39·8	39·2	49·3	57·0	59·8	58·0	64·5	62·0	*S*	51·5	43·0	*S*
29	45·0		47·5	56·5	62·0	*S*	66·3	63·6	62·1	48·0	42·5	47·0
30	46·3		*S*	56·7	61·0	59·2	64·9	62·1	61·3	43·8	*S*	44·1
31	48·3		49·8		59·2		65·7	*S*		49·8		42·5
Means.	40·7	42·9	45·6	50·6	57·8	60·0	62·6	63·5	60·6	54·3	42·7	44·0

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at the same times.

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	33·7	51·8	41·5	51·5	72·7	*S*	63·8	75·8	65·9	58·8	53·7	43·9
2	40·2	*S*	*S*	54·3	61·0	70·7	63·0	72·2	65·8	63·5	*S*	44·6
3	36·2	52·5	36·0	55·0	50·2	65·7	60·0	*S*	63·0	68·4	54·2	47·2
4	38·7	53·5	36·3	50·2	*S*	69·4	66·1	71·6	65·9	58·2	53·8	45·8
5	*S*	52·5	43·8	56·2	72·2	63·1	65·9	71·8	66·4	*S*	48·4	52·4
6	34·2	47·5	53·6	*S*	76·5	65·7	*S*	69·3	65·3	66·6	42·8	54·5
7	42·3	36·8	56·0	53·7	66·9	69·4	65·3	66·8	*S*	55·9	41·7	*S*
8	49·6	33·5	59·3	46·8	59·3	*S*	70·6	63·0	69·0	61·0	45·8	42·5
9	50·6	*S*	*S*	46·5	58·6	65·1	64·6	63·2	72·0	62·5	*S*	45·2
10	49·6	40·2	48·5	48·2	59·2	66·0	64·6	*S*	56·6	67·0	43·7	51·0
11	49·8	36·0	49·8	43·8	*S*	67·7	60·4	63·3	61·0	61·6	31·8	46·5
12	*S*	43·1	50·2	44·8	56·1	56·7	66·3	70·5	67·8	*S*	41·0	39·5
13	39·0	38·3	48·5	*S*	55·4	62·5	*S*	69·0	67·9	56·5	33·0	44·5
14	42·8	38·8	43·8	45·0	54·5	58·4	73·0	64·9	*S*	62·2	37·2	*S*
15	39·0	41·8	41·7	44·0	50·0	*S*	67·5	67·5	71·9	67·8	41·1	41·1

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers—*concluded.*

Day of the Month, 1862.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
a	°	°	°	°	°	°	°	°	°	°	°	°
16	37·0	*S*	*S*	51·0	60·6	62·7	65·4	63·5	65·4	59·1	*S*	42·4
17	30·2	41·2	46·0	55·0	66·4	65·8	66·8	*S*	63·8	55·4	45·0	50·9
18	31·9	50·8	46·2	GoodFriday.	*S*	60·4	69·8	59·4	64·1	50·3	43·7	43·5
19	*S*	53·0	44·2	56·0	72·7	59·4	64·4	71·5	69·8	*S*	39·9	46·8
20	28·7	55·0	40·2	*S*	69·0	60·3	*S*	69·0	69·0	51·9	40·4	40·7
21	32·8	53·2	38·3	60·5	58·5	59·5	67·9	71·1	*S*	52·6	38·9	*S*
22	46·0	51·2	43·2	58·3	58·5	*S*	71·0	61·9	60·2	57·3	39·9	38·3
23	41·5	*S*	*S*	54·6	59·7	61·4	62·0	70·6	62·4	55·2	*S*	41·5
24	51·2	39·2	57·2	60·0	66·8	66·3	63·7	*S*	64·0	51·9	38·3	44·2
25	44·3	40·6	60·2	68·5	*S*	61·8	72·9	71·2	61·8	50·5	39·0	ChristmasDay
26	*S*	35·0	54·2	63·8	68·0	69·9	76·0	73·9	65·5	*S*	40·5	47·5
27	44·6	36·0	58·1	*S*	61·4	61·8	*S*	73·7	65·7	54·0	43·5	45·0
28	43·5	37·5	49·2	68·0	63·3	61·0	69·8	68·5	*S*	49·7	49·5	*S*
29	50·3		46·6	66·5	69·8	*S*	75·0	70·0	65·9	47·2	41·8	47·8
30	50·2		*S*	65·8	62·6	61·5	70·4	66·9	64·6	43·0	*S*	42·8
31	53·8		55·3		60·2		71·1	*S*		51·7		41·2
Means.	41·9	44·1	48·0	54·7	62·6	63·7	67·3	68·5	65·4	57·0	42·7	45·1

Weekly Means of Readings of Thermometers.

1862. Period.			Thermometers sunk in the ground. Bulb 24 French Feet deep.	Bulb 12 French Feet deep.	Bulb 6 French Feet deep.	Bulb 3 French Feet deep.	Bulb 1 Inch deep.	Thermometer inclosed in the box which covers the scales of the deep-sunk Thermometers, and placed on a level with their scales.
	d		°	°	°	°	°	°
January	1 to January	7	51·35	49·56	46·34	41·31	38·3	37·6
	8 to	14	51·24	49·02	45·72	42·01	44·8	46·9
	15 to	21	51·07	48·44	45·75	41·59	36·0	33·3
	22 to	28	50·95	48·09	44·68	39·77	40·8	45·2
	29 to February	4	50·80	47·63	44·40	42·04	48·0	52·0
February	5 to	11	50·59	47·19	45·48	43·70	41·1	41·1
	12 to	18	50·41	47·05	45·03	41·22	40·9	42·3
	19 to	25	50·24	46·84	44·84	42·90	45·7	48·7
	26 to March	4	50·02	46·64	45·21	42·28	38·2	37·1
March	5 to	11	49·88	46·55	44·65	41·63	46·4	51·8
	12 to	18	49·70	46·35	45·21	44·07	45·3	46·1
	19 to	25	49·52	46·23	45·43	43·38	45·9	47·2
	26 to April	1	49·35	46·21	45·73	45·39	49·4	52·5
April	2 to	8	49·18	46·25	46·76	47·04	50·6	52·7
	9 to	15	48·99	46·44	47·51	46·70	45·2	45·4
	16 to	22	48·86	46·72	47·22	46·16	50·2	56·2
	23 to	29	48·78	46·84	47·94	49·15	55·7	63·6
	30 to May	6	48·72	47·08	49·47	51·97	58·5	66·4
May	7 to	13	48·64	47·52	50·90	53·81	56·8	59·3
	14 to	20	48·59	48·12	51·69	53·15	56·6	62·2
	21 to	27	48·56	48·63	52·15	54·28	57·2	62·2
	28 to June	3	48·58	49·10	52·93	55·69	61·2	65·4
June	4 to	10	48·62	49·59	54·07	57·70	61·5	66·5
	11 to	17	48·68	50·17	55·01	57·94	59·6	62·3
	18 to	24	48·76	50·72	55·22	57·07	58·4	61·2
	25 to July	1	48·87	51·18	55·24	57·27	59·8	63·3
July	2 to	8	48·99	51·51	55·53	57·78	61·0	65·2
	9 to	15	49·12	51·83	56·07	58·80	61·9	66·1
	16 to	22	49·27	52·19	56·70	59·69	62·6	67·6
	23 to	29	49·42	52·61	57·37	60·67	64·3	69·9
	30 to August	5	49·58	53·04	58·31	62·35	66·0	72·2
August	6 to	12	49·71	53·50	58·98	62·05	62·9	66·0
	13 to	19	49·86	53·99	58·94	61·04	62·8	66·0
	20 to	26	50·04	54·31	58·79	60·80	63·2	69·6
	27 to September	2	50·21	54·55	59·00	61·43	62·8	68·5
September	3 to	9	50·39	54·78	59·15	60·63	61·3	66·9
	10 to	16	50·56	54·97	58·84	59·98	60·3	65·1
	17 to	23	50·73	55·13	58·61	59·64	59·8	64·9
	24 to	30	50·89	55·19	58·28	58·80	60·6	64·6
October	1 to October	7	51·04	55·17	57·99	58·57	58·9	61·9
	8 to	14	51·20	55·17	57·69	57·78	58·1	61·8
	15 to	21	51·32	55·09	57·18	56·24	53·7	56·2
	22 to	28	51·44	54·97	55·77	52·90	50·2	53·1
	29 to November	4	51·55	54·64	54·46	51·74	49·2	50·6
November	5 to	11	51·63	54·15	53·56	50·69	45·4	42·4
	12 to	18	51·76	53·63	52·11	46·83	39·7	40·2
	19 to	25	51·73	53·02	50·33	44·90	39·5	39·4
	26 to December	2	51·78	52·27	48·93	43·56	42·0	44·0
December	3 to	9	51·79	51·49	48·31	44·95	46·3	47·9
	10 to	16	51·73	50·81	48·47	45·38	43·3	44·2
	17 to	23	51·66	50·33	47·89	44·18	43·3	43·6
	24 to	31	51·52	49·83	47·37	44·16	43·8	44·7

ABSTRACT OF THE CHANGES OF THE DIRECTION OF THE WIND, AS DERIVED FROM OSLER'S ANEMOMETER.

By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c., by *retrograde* is meant in the order N., W., S., E., N., &c.

1861. Dec. 31. 12. The direction of the wind was N.N.E.
1862. Jan. 31. 12. ,, ,, W., which implies a retrograde motion of $112\frac{1}{2}^\circ$.
On Jan. 14. 22 the trace was shifted to the next set of lines upwards; on Jan. $15^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 360°.
Therefore the whole excess of retrograde motion in the month of January was $112\frac{1}{2}^\circ$.

1862. Jan. 31. 12. The direction of the wind was W.
Feb. 28. 12. ,, ,, E., which implies a direct motion of 180°.
On Feb. 8. 22, the trace was shifted to the next set of lines upwards; on Feb. $17^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 360°.
Therefore the whole excess of direct motion in the month of February was 180°.

1862. Feb. 28. 12. The direction of the wind was E.
March 31. 12. ,, ,, W., which implies a retrograde motion of 180°.
On March 4. 22, $27^d.\ 22^h$, the trace was shifted to the next set of lines upwards; on March $16^d.\ 22^h$, $30^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 720°, and direct motion of 720°.
Therefore the whole excess of retrograde motion in the month of March was 180°.

1862. March 31. 12. The direction of the wind was W.
April 30. 12. ,, ,, S.E., which implies a retrograde motion of 135°.
On April 4. 22, $15^d.\ 22^h$, $24^d.\ 22^h$, $25^d.\ 22^h$, $29^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on April $14^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1800°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of April was 1305°.

1862. April 30. 12. The direction of the wind was S.E.
May 31. 12. ,, ,, E., which implies a retrograde motion of 45°.
On May 4. 1, $18^d.\ 22^h$, $23^d.\ 1^h$, the trace was shifted to the next set of lines downwards; on May $6^d.\ 22^h$, $8^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 720°.
Therefore the whole excess of direct motion in the month of May was 315°.

1862. May 31. 12. The direction of the wind was E.
June 30. 12. ,, ,, W.S.W., which implies a direct motion of $157\frac{1}{2}^\circ$.
On June 23. 22, the trace was shifted to the next set of lines downwards; on June $25^d.\ 22^h$, to the second set of lines downwards; on June $0^d.\ 22^h$, $26^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 720°.
Therefore the whole excess of direct motion in the month of June was $517\frac{1}{2}^\circ$.

1862. June 30. 12. The direction of the wind was W.S.W.
July 31. 12. ,, ,, S.W., which implies a retrograde motion of $22\frac{1}{2}^\circ$.
On July 5. 22, $28^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on July $23^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of July was $337\frac{1}{2}^\circ$.

1862. July 31. 12. The direction of the wind was **S.W.**
Aug. 31. 12. ,, ,, **N.E.**, which implies a direct motion of 180°.
On Aug. 18. 22, 20d. 22h, the trace was shifted to the next set of lines downwards ; on Aug. 26d. 22h, 30d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 720°.
Therefore the whole excess of direct motion in the month of August was 180°.

1862. Aug. 31. 12. The direction of the wind was **N.E.**
Sept. 30. 12. ,, ,, **S.W.**, which implies a retrograde motion of 180°.
On Sept. 5. 22, 7d. 22h, 24d. 22h, 28d. 22h, the trace was shifted to the next set of lines downwards ; on Sept. 14d. 22h, 20d. 2h, 26d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 1440°, and retrograde motion of 1080°.
Therefore the whole excess of direct motion in the month of September was 180°.

1862. Sept. 30. 12. The direction of the wind was **S.W.**
Oct. 31. 12. ,, ,, **S.E.**, which implies a direct motion of 270°.
On Oct. 6. 2, 6d. 3h, 9d. 2h. 30m, 9d. 22h, the trace was shifted to the next set of lines downwards ; on Oct. 21d. 2h. 30m, the trace was shifted to the next set of lines upwards, implying direct motion of 1440°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of October was 1350°.

1862. Oct. 31. 12. The direction of the wind was **S.E.**
Nov. 30. 12. ,, ,, **E.S.E.**, which implies a retrograde motion of $22\frac{1}{2}°$.
On Nov. 4. 2, 5d. 22h, 12d. 22h, the trace was shifted to the next set of lines downwards ; on Nov. 4d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of November was $697\frac{1}{2}°$.

1862. Nov. 30. 12. The direction of the wind was **E.S.E.**
Dec. 31. 12. ,, ,, **S.W.**, which implies a retrograde motion of $247\frac{1}{2}°$.
On Dec. 1. 22, the trace was shifted to the next set of lines downwards, implying direct motion motion of 360°.
Therefore the whole excess of direct motion in the month of December was $112\frac{1}{2}°$.

The whole excess of direct motion to the end of the year was $4882\frac{1}{2}°$.

The revolution-counter which is attached to the vertical spindle of the vane, whose readings increase with change of direction of the wind in the order **N.**, **E.**, **S.**, **W.**, &c., or in direct motion, and decrease with change of direction in the order **N.**, **W.**, **S.**, **E.**, &c. or in retrograde motion, gave the following readings :—

	revs.
On 1862, January 1	54·0
,, December 31	67·7

Implying an excess of direct motion, during the year, of 13·7 revolutions, or 4932°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1862.

1862, MONTH.	Monthly Amount of Rain collected in each Gauge.						
	Osler's Anemometer Gauge.	On the Roof of the Octagon Room.	On the Roof of the Library.	On the Roof of the Photographic Thermometer Shed.	Crosley's.	Cylinder partly sunk in the Ground read Daily.	Cylinder partly sunk in the Ground read Monthly.
	in.	in.	in.	in.	in.	in.	in.
January - -	1·2	1·4	1·4	1·8	1·6	1·8	1·9
February - -	0·3	0·4	0·4	0·4	0·4	0·5	0·5
March - -	2·1	2·4	2·8	3·5	3·2	3·5	3·7
April - -	1·8	2·3	2·4	2·8	2·6	2·8	2·8
May - - -	1·8	2·4	2·5	2·8	2·6	2·8	2·8
June - - -	1·2	1·6	1·4	1·9	1·9	1·9	1·8
July - - -	1·0	1·4	1·3	1·6	1·6	1·7	1·6
August - -	1·9	2·6	2·7	2·9	2·6	3·0	3·0
September - -	1·2	1·4	1·5	1·6	1·4	1·6	1·6
October - -	2·5	3·0	3·0	3·9	3·5	4·1	4·0
November - -	0·6	0·9	0·9	1·0	0·9	1·0	1·1
December - -	0·7	1·1	1·1	1·5	1·4	1·6	1·7
Sums - -	16·3	20·9	21·4	25·7	23·7	26·3	26·5

The heights of the receiving surfaces are as follows:

	Above the Mean Level of the Sea.			Above the Ground.	
	Ft.	In.		Ft.	In.
Osler's Anemometer Gauge	205	6	.....	50	9
Gauge on the Roof of the Octagon Room	193	$2\frac{1}{2}$	.....	38	$4\frac{1}{2}$
Gauge on the Roof of the Library	177	2	.....	22	4
Gauge on the Roof of the Photographic Thermometer Shed	164	10	.....	10	0
Crosley's Gauge	156	6	.....	1	8
The Two Cylinder Gauges partly sunk in Ground	155	3	.....	0	5

ROYAL OBSERVATORY, GREENWICH.

ABSTRACTS

OF

THE MAGNETIC OBSERVATIONS,

From 1841 to 1857,

MADE ON DAYS OF GREAT MAGNETIC DISTURBANCE.

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MADE ON DAYS OF GREAT MAGNETIC DISTURBANCE.

The period to which these Abstracts apply embraces two series of observations, in which, though the instruments are fundamentally the same, the methods of registration are very different. By using for each series the method properly adapted to it, we may expect to form one complete homogeneous collection. The first step in the following explanation is, therefore, the indication of the method by which the registrations in the different series have been so assimilated that they may be combined in continuous order, and may further receive the same treatment common to both.

The volumes of Greenwich Observations from 1848 to 1857 exhibit the successive maximum and minimum readings for the indications of each of the Magnetometers on the disturbed days (for the earlier portion), and on all days (for the remaining portion). The information given by these readings is so complete, and its form is so convenient, that it was obviously desirable to bring the records of observations from 1841 to 1847 into the same form. On examining the observations on days of great disturbance printed in the successive volumes from 1841 to 1847, it was found that, both in respect of the number of days, and in respect of the number of eye-observations on each day, a large portion ought to be omitted as unnecessary, in order to bring them to the same state as those based on the photographic registers from 1848 to 1857. The selection of the observations to be retained was entirely intrusted to the judgment of Mr. Glaisher; and there is no doubt that it has been effected in a manner on which no important improvement can be made.

The instrumental indications of Western Declination require no farther modification; but those of Horizontal Force and of Vertical Force require to be corrected for the temperature of the magnets. In the printed observations from 1841 to 1847, the correction for temperature is applied: in those from 1848 to 1857, the correction for temperature is not applied. In preparing for these reductions, the

correction for temperature has been investigated on the principles explained in the Greenwich Observations 1859 page (clxxxiii). The principle of the method is, to interpolate for each observation a temperature formed by uniform progression between the next preceding and next following observed temperature, and then to apply to that interpolated temperature a quantity which has been found (from discussion of numerous observations) to represent the error of simple interpolation. In special cases, the true temperature will not be obtained thus with perfect accuracy, but the deviation from truth will never be important.

In order to estimate truly the character of disturbance in the magnetic observations, it appeared desirable to follow the usual course of comparing the disturbed observations with the mean of observations at the same solar hour in the same month. For the observations from 1848 to 1857, these means are given in the volume for 1859; they are there formed by use only of the observations taken on days which are free from extraordinary disturbance; and this course appears desirable, not on the principle of thus obtaining a value which in the long run is essentially or importantly different (for it appears, *Phil. Trans.*, 1863, page 28, that the disturbances do not sensibly modify the diurnal inequalities), but because it avoids the interference of troublesome irregularities. In the volumes from 1841 to 1847, the means had been deduced from the assemblage of all days, disturbed as well as undisturbed; it was desirable, therefore, to investigate new means, omitting those disturbed days. This was done by Mr. Glaisher.

It is important to observe that the corrections for temperature of the magnet were applied on strictly the same principle to the monthly means of undisturbed observations and to the individual disturbed observations. There is always a little uncertainty attaching to temperature-corrections; but the effects of this uncertainty nearly disappear in comparisons which are made on these principles.

The whole of the observations from 1841 to 1857, both monthly means and individual disturbed observations, after having undergone these operations, are in the same form, and are fitted for a uniform method of treatment. I proceed to explain the nature of the treatment.

First. The given monthly means apply to intervals of one hour (in the later series), or of two hours (in the earlier series). Between these hourly or two-hourly numbers, by interpolation, monthly numbers were found corresponding to the time of every disturbed observation. The difference between the interpolated monthly numbers and the registered disturbed observation is considered as the true amount of disturbance.

Second. Each day or longer time considered to include one magnetic storm was treated by itself, having no connexion whatever with any other storm.

Third. The great object now to be obtained was, that a series of numbers should be prepared, exhibiting (by a legitimate process, of general character) the great changes of slow period in the general order of registered numbers, and exhibiting also

the more rapid irregularities, which when combined with the slowly-changing numbers will form the registered numbers (corrected for temperature, &c.) For this purpose, the mean of adjacent corrected numbers was taken to form a first series of means; the means of adjacent numbers in the first to form a second series of means; and in like manner a third and a fourth series of means. The last series was adopted as representing the slowly-changing numbers, and is therefore called the "Adopted Numbers." The differences between its numbers and the corresponding numbers interpolated among the hourly numbers of the Monthly Mean are considered as the "Wave-inequality;" and the differences between the corrected registered numbers and the Adopted Numbers are the "Irregularities."

Fourth. The continuation of the same sign in the numbers of Wave-inequality was considered as defining the limits of a wave; and the following operations were performed independently for each wave. The mean of all the wave-inequalities in each wave was taken as the Mean-wave-inequality in that wave; and its product by the number of hours in the wave is called the "Fluctuation,"—a word used here in a purely technical sense, but which expresses the general influence of the wave, taking account both of its duration in time and its magnitude.

Fifth. The mean of the Irregularities through the wave is taken, and the number of Irregularities is counted; but no further operation is performed on them.

The following instance will exhibit the principal parts of the operation for the magnetic storm of 1853, March 11, Horizontal Force. The times, the fundamental observations of temperature, and the uncorrected readings of Horizontal Force, are taken from the printed Observations for 1853, pages (xxiii) and (xxiv). The Monthly Means are interpolated among those in the printed Observations 1859, page (ccv), for 1853 March; but they are all diminished by ·0085, because, as is stated in the same volume, page (clxxxii), line 5 from bottom, a correction + ·0085 has been applied in the formation of Monthly Means, which correction was not applied in the volume for 1853.

Göttingen Time.	Corrected Interpolated Temperature.	Correction for Temperature.	Uncorrected original Reading.	Corrected original Reading.	First Sum.	Second Sum.	One-fourth.	Third Sum.	Fourth Sum.	One-fourth or Adopted.	Excess of Corrected Original over Adopted; or Irregularity.	Monthly Mean.	Excess of Adopted over Monthly Mean, or Wave Inequality.
h m											+ −		+ −
0. 5	49·6	·0117	·0891	·1008									
					·2014								
1. 20	51·1	118	888	1006		·4030	·1008						
					2016			·2014					
1. 33	51·5	119	891	1010		4026	1006		·4027	·1007	03	·1020	13
					2010			2013					
2. 20	52·9	120	880	1000		4027	1007		4036	1009	09	1022	13
					2017			2023					

Göttingen Time.	Corrected Interpolated Temperature.	Correction for Temperature.	Uncorrected original Reading.	Corrected original Reading.	First Sum.	Second Sum.	One-fourth.	Third Sum.	Fourth Sum.	One-fourth or Adopted.	Excess of corrected Original over Adopted; or Irregularity.	Monthly Mean.	Excess of Adopted over Monthly Mean, or Wave Inequality.
h m	°										+ −		+ −
4. 30	56·3	·0124	·0893	·1017		·4063	·1016		·4065	·1016	01	·1028	12
					·2046			·2042					
4. 46	56·4	124	905	1029		4106	1026		4095	1024	05	1029	05
					2060			2053					
5. 12	56·7	125	906	1031		4109	1027		4108	1027	04	1029	02
					2049			2055					
5. 30	56·8	125	893	1018		4112	1028		4120	1030	12	1029	01
					2063			2065					
5. 44	56·8	125	920	1045		4146	1037		4139	1035	10	1029	06
					2083			2074					
6. 8	57·0	125	913	1038		4150	1037		4143	1036	02	1029	07
					2067			2069					
6. 15	57·0	125	904	1029		4127	1032		4130	1032	03	1029	03
					2060			2061					
6. 23	57·0	125	906	1031		4116	1029		4118	1030	01	1029	01
					2056			2057					
6. 33	57·1	125	900	1025		4112	1028		4111	1028	03	1030	02
					2056			2054					
7. 0	57·0	125	906	1031		4103	1026		4100	1025	06	1030	05
					2047			2046					
7. 15	57·0	125	891	1016		4080	1020		4088	1022	06	1030	08
					2033			2042					
7. 23	57·0	125	892	1017		4089	1022		4092	1023	06	1030	07
					2056			2050					
7. 36	56·9	125	914	1039		4113	1028		4103	1026	13	1031	05
					2057			2053					
7. 54	56·8	125	893	1018		4100	1025		4100	1025	07	1031	06
					2043			2047					
8. 15	56·7	125	900	1025		4089	1022		4094	1023	02	1031	08
					2046			2047					
8. 25	56·7	125	896	1021		4099	1025		4094	1024	03	1031	07
					2053			2047					
8. 45	56·5	124	908	1032		4089	1022		4091	1023	09	1032	09
					2036			2044					
9. 15	56·4	124	880	1004		4090	1022		4100	1025	21	1033	08
					2054			2056					
9. 45	56·3	124	926	1050		4134	1034		4122	1030	20	1034	04
					2080			2066					
9. 56	56·0	124	906	1030		4128	1032		4121	1030		1034	04
					2048			2055					
10. 22	55·7	124	894	1018		4094	1023		4101	1025	07	1033	08
					2046			2046					
10. 30	55·7	124	904	1028		4093	1023		4090	1023	05	1032	09
					2047			2044					
10. 45	55·6	123	896	1019		4085	1021		4093	1023	04	1032	09
					2038			2049					
11. 45	54·9	123	896	1019		4113	1028		4119	1030	11	1032	02
					2075			2070					
11. 48	54·9	123	933	1056		4169	1042		4159	1040	16	1032	08
					2094			2089					
12. 2	54·7	122	916	1038		4188	1047		4175	1044	06	1032	12
					2094			2086					

Göttingen Time.	Corrected Interpolated Temperature.	Correction for Temperature.	Uncorrected original Reading.	Corrected original Reading.	First Sum.	Second Sum.	One-fourth.	Third Sum.	Fourth Sum.	One-fourth or Adopted.	Excess of corrected Original over Adopted; or Irregularity.	Monthly Mean.	Excess of Adopted over Monthly Mean, or Wave Inequality.
h m	°										+ −		+ −
12. 6	54·7	·0122	·0934	·1056		·4155	·1039		·4154	·1039	17	·1032	07
					·2061			·2068					
12. 30	54·3	122	883	1005		4114	1029		4131	1033	28	1031	02
					2053			2063					
12. 54	54·1	122	926	1048		4136	1034		4138	1034	14	1031	03
					2083			2075					
13. 8	53·8	121	914	1035		4165	1041		4150	1038	03	1031	07
					2082			2075					
13. 28	53·6	121	926	1047		4135	1034		4125	1031	16	1031	
					2053			2050					
13. 44	53·4	121	885	1006		4063	1016		4068	1017	11	1032	15
					2010			2018					
13. 57	53·2	121	883	1004		4008	1002		4017	1004		1032	28
					1998			1999					
14. 4	53·2	121	873	994		3988	997		3989	997	03	1032	35
					1990			1990					
14. 16	53·0	120	876	996		3972	993		3982	995	01	1032	37
					1982			1992					
14. 30	52·8	120	866	986		3994	999		4005	1001	15	1032	31
					2012			2013					
15. 16	52·4	120	906	1026		4058	1014		4044	1011	15	1033	22
					2046			2031					
16. 4	52·5	120	900	1020		4060	1017		4055	1014	06	1034	20
					2023			2024					
16. 45	51·3	119	884	1003		4029	1007		4037	1009	06	1035	26
					2006			2013					
17. 14	51·1	118	885	1003		4025	1006		4035	1009	06	1035	26
					2019			2022					
17. 30	50·9	118	898	1016		4063	1016		4060	1015	01	1036	21
					2044			2038					
18. 40	50·2	117	911	1028		4089	1022		4081	1020	08	1036	16
					2045			2043					
18. 57	50·1	117	900	1017		4083	1021		4081	1020	03	1035	15
					2038			2038					
19. 35	49·7	117	904	1021		4066	1017		4070	1018	03	1033	15
					2028			2032					
20. 12	49·5	117	890	1007		4062	1015		4067	1017	10	1031	14
					2034			2035					
21. 0	49·2	116	911	1027		4081	1020		4079	1020	07	1028	08
					2047			2044					
21. 40	49·0	116	904	1020		4096	1024		4092	1023	03	1026	03
					2049			2048					
21. 45	49·0	116	913	1029		4096	1024		4094	1023	06	1026	03
					2047			2046					
21. 55	49·1	116	902	1018		4089	1022		4085	1021	03	1025	04
					2042			2039					
22. 0	49·1	116	908	1024		4066	1017		4066	1016	08	1025	09
					2024			2027					
22. 37	49·3	116	884	1000		4039	1010		4047	1012	12	1022	10
					2015			2020					
23. 0	49·6	117	898	1015		4040	1010		4037	1009	06	1020	11
					2025			2017					
23. 35	49·8	117	893	1010		4029	1007						
					2004								
23. 59	50·2	117	877	994									

The storm, it will be seen, consists of five waves, defined by the horizontal lines in the table above. The means are as follows:

	Mean Irregularity.	Mean Wave-Inequality.
First Wave	± ·0004	− ·0009
Second Wave	± ·0006	+ ·0004
Third Wave	± ·0008	− ·0007
Fourth Wave	± ·0014	+ ·0006
Fifth Wave	± ·0007	− ·0017

The product of the last numbers by the corresponding Duration of Wave will give the Fluctuation which will be found in the tables below; and the Number of Irregularities in the tables below will at once be taken from the table just exhibited.

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1841.	h m h m	h	′				h			′		h	h m h m	h		
Sept. 24	10. 0—14. 54	4·90	−11·0	−0·0032	−0·0157	−0·0022	13·90	−0·0002	2	6·8	0·0020	2·45	10. 2—22. 2	12·00	−0·0038	−0·0456
	14. 54—23. 54	9·00	+ 5·3	·0015	+ ·0135				8	4·0	·0012	1·13				
„ 25	0. 0— 3. 40	3·70	+ 14·9	+ ·0041	+ ·0152				14	9·1	·0026	0·26	0. 2— 6. 59	6·95	+ ·0057	+ ·0396
	3. 40— 3. 51	0·18	−14·3	− ·0041	− ·0007				2	41·7	·0121	0·09	6. 59—12. 54	5·92	− ·0076	− ·0450
	3. 51— 3. 57	0·10	+ 6·2	+ ·0018	+ ·0002				3	26·4	·0077	0·03				
	3. 57— 4. 10	0·22	− 3·3	− ·0010	− ·0002	− ·0200	22·03	− ·0009	3	0·8	·0002	0·07				
	4. 10— 6. 49	2·65	+ 6·5	+ ·0019	+ ·0051				25	4·8	·0014	0·11				
	6. 49—22. 0	15·18	− 9·0	− ·0026	− ·0395				23	3·2	·0009	0·66				
„ 27	1. 50—10. 0	8·17	−11·2	− ·0033	− ·0270	− ·0270	8·17	− ·0033	6	4·9	·0014	1·36	1. 52— 4. 25	2·55	− ·0002	− ·0005
													4. 25— 4. 48	0·38	+ ·0004	+ ·0002
													4. 48—10. 2	5·23	− ·0018	− ·0094
Oct. 25	0. 0— 2. 12	2·20	+ 0·7	+ ·0002	+ ·0004				1	5·6	·0016	2·20	0. 2—22. 2	22·00	− ·0022	− ·0484
	2. 12—12. 57	10·75	−10·9	− ·0032	− ·0344				28	4·6	·0013	0·38				
	12. 57—13. 21	0·40	+ 0·7	+ ·0002	+ ·0001	− ·0417	22·00	− ·0019	1	6·6	·0019	0·40				
	13. 21—22. 0	8·65	− 3·1	− ·0009	− ·0078				3	3·1	·0009	2·88				
Nov. 18	6. 0—17. 17	11·28	−26·0	− ·0075	− ·0848				14	6·4	·0019	0·81	6. 2—23. 55	17·88	− ·0007	− ·0125
	17. 17—23. 54	6·62	+ 5·9	+ ·0017	+ ·0113	− ·0735	17·90	− ·0041	11	2·1	·0006	0·60				
„ 19	0. 0— 3. 0	3·00	+ 3·6	+ ·0010	+ ·0030				4	1·5	·0004	0·75	0. 2—12. 14	12·20	− ·0012	− ·0146
	3. 0—12. 17	9·28	− 3·4	− ·0010	− ·0093				6	5·2	·0015	1·55	12. 14—13. 26	1·20	+ ·0007	+ ·0008
	12. 17—13. 17	1·00	+ 2·2	+ ·0006	+ ·0006	+ ·0016	22·73	+ ·0001	2	5·4	·0016	0·50	13. 26—24. 2	10·60	− ·0013	− ·0138
	13. 17—14. 52	1·58	− 1·5	− ·0004	− ·0006				2	3·6	·0010	0·79				
	14. 52—22. 46	7·87	+ 3·4	+ ·0010	+ ·0079				5	6·2	·0018	1·57				
Dec. 3	0. 0— 5. 3	5·05	+ 3·6	+ ·0010	+ ·0050				2	7·9	·0023	2·53	0. 2— 6. 12	6·17	− ·0027	− ·0166
	5. 3— 7. 19	2·27	− 4·9	− ·0014	− ·0032	+ ·0088	12·74	+ ·0007	3	9·3	·0027	0·76	6. 12— 7. 0	0·80	+ ·0002	+ ·0001
	7. 19—12. 44	5·42	+ 4·4	+ ·0013	+ ·0070				2	1·3	·0004	2·71	7. 0—12. 45	5·75	− ·0007	− ·0040
„ 14	6. 0— 8. 35	2·58	+ 1·0	+ ·0003	+ ·0008	− ·0296	10·00	− ·0030	2	5·3	·0015	1·29	6. 2—16. 2	10·00	− ·0013	− ·0130
	8. 35—16. 0	7·42	−14·2	− ·0041	− ·0304				6	6·5	·0019	1·24				
1842.																
Jan. 1	6. 0—12. 41	6·68	−12·4	−0·0036	−0·0240	−0·0240	6·68	−0·0036	6	3·9	0·0011	1·11	6. 2—12. 42	6·67	+0·0058	+0·0387
Feb. 24	10. 0—12. 46	2·77	− 9·0	− ·0026	− ·0072				2	5·5	·0016	1·39	10. 2—18. 2	8·00	− ·0050	− ·0400
	12. 46—13. 43	0·95	+10·6	+ ·0031	+ ·0029	− ·0090	8·00	− ·0011	3	7·8	·0023	0·32				
	13. 43—18. 0	4·28	− 3·7	− ·0011	− ·0047				2	5·6	·0016	2·14				
April 14	16. 0—23. 38	7·63	+ 9·7	+ ·0028	+ ·0214	+ ·0214	7·63	+ ·0028	12	4·4	·0013	0·64	16. 2—23. 27	7·42	− ·0057	− ·0423
„ 15	0. 0— 8. 29	8·48	+ 1·4	+ ·0004	+ ·0034				1	11·6	·0034	8·48	0. 2—24. 2	24·00	− ·0059	− ·1416
	8. 29—16. 30	8·02	− 4·7	− ·0014	− ·0112	+ ·0087	23·09	+ ·0004	13	5·5	·0016	0·62				
	16. 30—23. 5	6·59	+ 8·7	+ ·0025	+ ·0165				6	2·9	·0008	1·10				
July 1	16. 0—20. 10	4·17	+ 4·6	+ ·0013	+ ·0054				1	17·9	·0052	4·17	16. 2—23. 45	7·72	− ·0023	− ·0178
	20. 10—22. 2	1·87	− 5·4	− ·0016	− ·0030				3	6·5	·0019	0·62				
	22. 2—22. 6	0·07	+ 0·5	+ ·0001	·0000	+ ·0008	7·74	+ ·0001	1	0·1	·0000	0·07				
	22. 6—23. 44	1·63	− 3·3	− ·0010	− ·0016				4	2·4	·0007	0·41				
„ 2	0. 0—13. 23	13·38	−13·3	− ·0039	− ·0523	− ·0523	13·58	− ·0039	23	5·2	·0015	0·58	0. 2— 1. 7	1·08	− ·0013	− ·0014
													1. 7— 2. 25	1·30	+ ·0015	+ ·0020
													2. 25— 4. 18	1·88	− ·0004	− ·0008
													4. 18— 7. 53	3·58	+ ·0016	+ ·0057
													7. 53—13. 24	5·52	− ·0035	− ·0193
„ 3	14. 0—16. 39	2·65	−18·4	− ·0054	− ·0143	− ·0003	9·68	·0000	10	8·2	·0024	0·26	14. 2—24. 2	10·00	− ·0065	− ·0650
	16. 39—23. 41	7·03	+ 6·9	+ ·0020	+ ·0140				19	3·6	·0010	0·37				
Nov. 18	1. 52—16. 0	14·17	− 8·2	− ·0024	− ·0340	− ·0340	14·17	− ·0024	11	6·2	·0018	1·29	1. 52—16. 2	14·17	− ·0050	− ·0710
„ 21	10. 0—15. 40	5·67	−11·2	− ·0033	− ·0187				6	2·8	·0008	0·94	10. 2—15. 7	5·08	− ·0019	− ·0097
	15. 40—22. 0	6·33	+ 7·1	+ ·0021	+ ·0133	− ·0054	12·00	− ·0005	8	3·6	·0010	0·79	15. 7—17. 37	2·50	+ ·0023	+ ·0058
													17. 37—22. 2	4·42	− ·0021	− ·0093
Dec. 9	4. 0—14. 0	10·00	− 7·6	− ·0022	− ·0220	− ·0220	10·00	− ·0022	19	3·8	·0011	0·53	4. 2—10. 42	6·67	− ·0024	− ·0160
													10. 42—11. 15	0·55	+ ·0002	+ ·0001
													11. 15—14. 2	2·78	− ·0010	− ·0028

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
−0·0456	12·00	−0·0038	6	0·0010	2·00
−·0054	12·87	−·0004	42	·0022	0·17
			31	·0009	0·19
			1	·0038	2·55
−·0097	8·16	−·0012	4	·0004	0·10
			7	·0005	0·75
−·0484	22·00	−·0022	36	·0010	0·61
			10	·0009	1·22
−·0276	24·00	−·0012	4	·0014	0·30
			12	·0007	0·88
			6	·0014	1·03
−·0205	12·72	−·0016	3	·0009	0·27
			4	·0004	1·44
−·0130	10·00	−·0013	9	·0016	1·11
+0·0387	6·67	+0·0058	8	0·0005	0·83
−·0400	8·00	−·0050	9	·0018	0·89
−·0423	7·42	−·0057	11	·0015	0·67
−·1416	24·00	−·0059	35	·0011	0·67
−·0178	7·72	−·0023	15	·0013	0·51
			3	·0015	0·36
			8	·0012	0·16
−·0138	13·36	−·0010	4	·0008	0·47
			6	·0012	0·60
			14	·0018	0·39
−·0650	10·00	−·0065	42	·0012	0·24
−·0710	14·17	−·0050	14	·0010	1·01
			5	·0010	1·02
−·0132	12·00	−·0011	6	·0020	0·42
			4	·0009	1·11
			33	·0005	0·22
−·0187	10·00	−·0019	2	·0006	0·28
			4	·0002	0·70

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
9. 57—23. 57	14·00	−0·0011	−0·0028	−0·6392	−0·0392	14·00	−0·0028	2	0·0006	0·0015	7·00
1. 47—13. 3	11·27	+·0089	+·0229	+·2580	+·2580	11·27	+·0229	61	·0011	·0028	0·18
1. 47— 9. 57	8·17	+·0032	+·0082	+·0670	+·0670	8·17	+·0082	3	·0003	·0008	2·72
1. 47— 8. 57	7·17	+·0018	+·0046	+·0330	+·0226	20·17	+·0011	11	·0005	·0013	0·65
8. 57—21. 57	13·00	−·0003	−·0008	−·0104				3	·0002	·0005	4·33
5. 57—11. 9	5·20	+·0007	+·0018	+·0094				2	·0005	·0013	2·60
11. 9—22. 50	11·68	−·0014	−·0036	−·0420	−·0323	18·00	−·0018	15	·0005	·0013	0·78
22. 50—23. 57	1·12	+·0001	+·0003	+·0003				1	·0001	·0003	1·12
0. 16— 8. 9	7·88	+·0003	+·0008	+·0063	−·0379	23·68	−·0016	6	·0005	·0013	1·31
8. 9—23. 57	15·80	−·0011	−·0028	−·0442				7	·0004	·0010	2·26
1. 50—12. 43	10·88	+·0015	+·0039	+·0424	+·0424	10·88	+·0039	3	·0002	·0005	3·63
5. 57—15. 58	10·02	+·0024	+·0062	+·0621	+·0621	10·02	+·0062	6	·0005	·0013	1·67
5. 57—12. 4	6·12	+0·0004	−0·0010	+0·0061	−0·0061	6·12	+0·0010	5	0·0001	0·0003	1·22
9. 57—12. 49	2·87	+·0004	−·0010	+·0029	+·0214	8·00	+·0002	2	·0001	·0003	1·44
12. 49—17. 57	5·13	−·0001	−·0003	−·0015				1	·0003	·0008	5·13
15. 57—23. 57	8·00	−·0038	−·0098	−·0784	−·0784	8·00	−·0098	6	·0006	·0015	1·33
1. 47—11. 24	9·62	+·0028	+·0021	+·0262	−·0061	22·17	−·0003	4	·0004	·0010	2·41
11. 24—23. 57	12·55	−·0008	−·0021	−·0263				11	·0003	·0008	1·14
15. 57—18. 27	2·50	+·0004	−·0010	+·0025				1	·0009	·0023	2·50
18. 27—18. 42	0·25	−·0001	−·0003	−·0001	+·0135	8·02	+·0017	1	·0001	·0003	0·25
18. 42—23. 58	5·27	+·0008	−·0021	+·0111				8	·0004	·0011	0·66
0. 11—13. 24	13·22	+·0018	−·0046	+·0608	+·0608	13·22	+·0046	12	·0005	·0013	1·32
13. 57—20. 40	6·72	−·0024	−·0062	−·0417	−·0289	12·00	−·0029	17	·0005	·0013	0·40
20. 40—23. 57	3·28	+·0015	+·0039	+·0128				3	·0003	·0008	1·09
1. 47—15. 58	14·18	+·0026	+·0013	+·0185	+·0185	14·18	+·0013	4	·0002	·0005	3·55
9. 57—21. 57	12·00	−·0010	−·0026	−·0312	−·0312	12·00	−·0026	1	·0003	·0008	12·00
3. 58—14. 0	10·03	+·0012	+·0031	+·0311	+·0311	10·03	+·0031	6	·0002	·0005	1·67

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1843.		h	′				h			′		h	h m h m	h		
Jan. 2	4 9—14 9	[illegible]	+ 0·2	+ ·0018	+ 0·2180	+ 0·0180	10·00	+ 0·0018	5	4·1	0·0012	2·00	4. 2—14. 2	10·00	−0·0018	−0·0180
Feb. 6	8. 0—10. 55	2·92	− 3·1	− ·0010	− ·0029	·0002	6·00	·0000	1	5·8	·0017	2·92	Values insufficient			
	10. 55—14. 0	3·08	+ 3·5	+ ·0012	+ ·0031				2	1·2	·0003	1·54				
,, 16	0. [illegible]	[illegible]	− 3·[illegible]	[illegible]	[illegible]	− ·0044	4·00	− ·0011	[illegible]	[illegible]	[illegible]	[illegible]	6. 2—10. 2	4·00	− ·0012	− ·0048
,, 24	4. [illegible] 11. 21	7·35	− 4·0	[illegible]	[illegible]				5	2·4	·0007	1·47	4. 2—10. 59	6·95	− ·0021	− ·0146
	11. 21—11. 44	[illegible]	[illegible]	[illegible]	[illegible]	− ·0129	11·58	− ·0011	2	2·3	·0007	0·19	10. 59—11. 52	0·88	+ ·0007	+ ·0006
	11. 44—15. 35	3·85	− 5·2	− ·0011	− ·0042				5	4·[illegible]	·0014	0·77	11. 52—15. 38	3·77	− ·0013	− ·0049
May 9	10. [illegible]—14. 28	[illegible]	−10·[illegible]	[illegible]	[illegible] 216	− ·0216	4·40	− ·0049	17	4·2	·0012	0·26	10. 2—14. 8	4·10	− ·0055	− ·0226
July 24	10. 0—12. 28	2·47	− 2·[illegible]	[illegible]	− ·0002	− ·0145	13·74	+ ·0011	1	0·7	·0002	2·47	10. 2—13. 29	3·45	+ ·0003	− ·0010
	12. 28—23. 44	11·27	[illegible]	[illegible]	− 147				3	5·1	·0015	3·76	13. 29—23. 44	10·25	− ·0023	− ·0237
,, 25	[illegible] 0— 6. 0	6·00	− 10·1	[illegible]	[illegible]	+ ·0210	6·[illegible]	+ ·0035	14	3·7	·0011	0·43	0. 2— 3. 37	3·58	− ·0001	− ·0004
													3. 37— 4. 27	0·83	+ ·0007	+ ·0006
													4. 27— 4. 31	0·07	− ·0001	·0000
													4. 31— 5. 15	0·73	+ ·0011	+ ·0008
													5. 15— 6. 2	0·78	− ·0010	− ·0008
1844.																
March 29	8 0—18. 17	[illegible]	− 7·0	−·0022	·0227											
	18. 17—23. 44	5·45	+ 5·4	+ ·0016	+ ·0087	−0·0140	15·73	−0·0009	13	4·9	0·0012	0·57	8. 2—16. 18	8·27	−0·0022	−0·0182
									3	2·2	·0006	1·82	16. 18—17. 8	0·83	+ ·0002	+ ·0002
													17. 8—23. 44	6·60	− ·0019	− ·0125
,, 30	[illegible] 0— 5. 10	5·17	+ 2·4	+ [illegible]	+ 0036				5	3·3	·0010	1·03	0. 2— 8. 49	8·78	− ·0009	− ·0079
	5. 10— 8. 8	2·97	− 7·[illegible]	− [illegible]	− ·0059				5	6·9	·0020	0·59	8. 49— 8. 53	0·07	+ ·0002	·0000
	8. 8— 8. 18	[illegible]	[illegible]	+ ·0002	[illegible]	− ·0097	12·01	− ·0008	1	2·2	·0006	[illegible]	8. 53—12. 2	3·15	− ·0015	− ·0047
	8. 18—12. 0	3·7[illegible]	− 7·0	− ·0020	− [illegible]				[illegible]	4·4	·0013	0·53				
Oct. 1	6 0—12 0	[illegible]	− 9·1	− ·0026	− [illegible]	− ·0156	6·[illegible]	− ·0026	9	2·1	·0006	[illegible]	6. 2—12. 2	6·00	− ·0033	− ·0198
,, 20													14. 2—22. 2	8·00	− ·0028	− ·0224
Nov. 16	0. 0— 7. 4	[illegible]	+ [illegible]	+ [illegible]	+ ·0156				2[illegible]	3·4	·0010	0·55	0. 2—10. 2	10·00	− ·0028	− ·0280
	[illegible] 4—13. 0	2·93	− 5·2	− ·0015	− ·0044	+ ·0112	13·10	+ ·0011	[illegible]	4·[illegible]	·0012	[illegible]				
,, 22	0 0—14. [illegible]	[illegible]	−10·6	− ·0031	− ·0248	− 0248	8·00	− ·0031	22	5·7	·0011	0·36	6. 2—10. 31	4·48	− ·0041	− ·0184
													10. 31—11. 38	1·12	+ ·0011	+ ·0012
													11. 38—14. 2	2·43	− ·0010	− ·0024
1845.																
Jan. 9	1 [illegible]—20. [illegible]	[illegible]	− 9·9	−·0029	−·0290	−0·0240	10·[illegible]	−·0029	15	3·8	0·0011	0·67	10. 2—20. 2	[illegible]	−0·0044	−0·0440
Feb. 25	1. 52—17. 6	[illegible]	− 4·4	− ·0013	− ·0199	− ·0198	15·72	− ·0013	15	3·[illegible]	·0010	[illegible]	1. 52— 8. 26	6·57	− ·0004	− ·0026
	17. 6—17. 33	[illegible]	1·1	[illegible]	+ ·0001				1	1·[illegible]	·0005	2·45	8. 26— 8. 56	0·50	+ ·0009	− ·0004
													8. 56—18. 2	9·10	− ·0017	− ·0155
March 26	4. [illegible]—18. [illegible]	[illegible]	− 5·0	[illegible]	[illegible]	[illegible]	14·[illegible]	− [illegible]	12	3·6	·0010	1·17	4. 2— 7. 31	3·48	− ·0008	− ·0028
													7. 31— 8. 12	0·68	+ ·0010	+ ·0007
													8. 12—18. 2	9·83	− ·0007	− ·0069
Aug. 29	8. [illegible]—11. 29	[illegible]	− 3·8	− [illegible]	[illegible] 38				9	1·1	[illegible]	[illegible]	8. 2—14. 7	6·[illegible]	− ·0004	− ·0024
	11. 38—13. [illegible]	[illegible]	+ 1·8	[illegible]	+ ·0008	− ·0037	6·15	− [illegible]	[illegible]	1·2	·0003	[illegible]				
	13. 0—14. 13	1·17	− 2·2	− [illegible]	− ·0007				3	1·3	[illegible]	[illegible]				
Dec. 3	1. 50— 4. 29	2·65	+ 4·2	+ [illegible]	+ [illegible] 32				3	2·1	[illegible]	[illegible] 88	1. 52—16. 2	14·17	− [illegible]	− ·0667
	4. 30— 4. 46	[illegible]	− 2·7	− [illegible]	− [illegible]				3	6·[illegible]	[illegible]	0·09				
	4. 47— 8. 12	[illegible]	+ 11·2	+ [illegible]	[illegible] 112	− ·0022	14·13	− ·0002	23	5·6	·0016	0·15				
	8. 13—10. [illegible]	[illegible]	− [illegible]	− [illegible]	− [illegible] 164				28	3·1	·0009	[illegible] 28				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				
−0·0218	10·00	−0·0018	6	0·0029	1·67
for Reduction.					
−·0048	4·00	−·0012	6	0·0003	0·67
			6	0·0006	1·16
−·0189	11·00	−·0016	7	0·0009	0·12
			24	0·0003	0·16
−·0226	4·10	−·0055	22	0·0009	0·19
			2	0·0003	1·76
−·0227	13·00	−·0017	4	0·0013	2·56
			1	0·0019	3·58
			4	0·0012	0·21
+·0002	5·99	·0000	1	0·0001	0·07
			5	0·0014	0·15
			2	0·0002	0·39
			20	0·0006	0·21
−0·0305	15·00	−0·0019	1	0·0012	0·83
			3	0·0013	2·25
			23	0·0013	0·38
−·0126	12·00	−·0011	2	0·0002	0·13
			4	0·0007	0·79
−·0198	6·00	−·0033	9	0·0008	0·67
−·0224	8·00	−·0028	11	0·0021	0·73
−·0280	10·00	−·0028	19	0·0015	0·53
			25	0·0008	0·18
−·0196	8·00	−·0025	4	0·0016	1·25
			2	0·0015	1·20
−0·0345	12·00	−0·0029	9	0·0012	1·11
			3	0·0004	0·19
−·0177	14·17	−·0011	7	0·0004	0·57
			16	0·0005	0·56
			7	0·0008	0·50
−·0209	13·99	−·0016	4	0·0015	0·17
			5	0·0027	1·97
−·0024	6·00	−·0004	11	0·0003	0·55
−·0360	14·17	−·0047	61	0·0012	0·23

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m											
3. 57—13. 58	10·02	−0·0010	−0·0026	−0·0261	−0·0261	10·02	−0·0026	2	0·0001	0·0003	5·01
Values insufficient for Reduction.											
Values insufficient for Reduction.											
3. 58—11. 44	7·77	−·0003	+·0008	+·0062				2	·0002	·0005	3·88
11. 44—15. 37	3·88	−·0003	−·0008	−·0031	−·0031	11·65	−·0003	4	·0002	·0005	2·91
9. 58—12. 36	2·63	−·0013	−·0033	−·0087				7	·0005	·0013	1·88
12. 36—14. 8	1·53	−·0006	+·0015	+·0023	−·0064	4·16	−·0015	2	·0004	·0010	2·77
9. 58—23. 58	14·00	−·0004	+·0010	−·0140	−·0140	14·00	+·0010	5	·0001	·0003	2·80
0. 11— 5. 45	5·57	−·0023	+·0059	+·0329	+·0329	5·57	−·0059	5	·0001	·0003	1·11
7. 58—23. 58	16·00	−0·0011	−0·0028	−0·0448	−0·0448	16·00	−0·0028	9	0·0002	0·0005	1·78
0. 21— 7. 11	6·83	+·0005	+·0013	+·0089				2	·0003	·0007	3·41
7. 11—11. 58	4·78	−·0006	−·0015	−·0072	−·0017	11·61	−·0002	5	·0002	·0005	2·39
5. 58—11. 57	5·98	−·0001	+·0003	+·0018	−·0018	5·98	+·0003	1	·0002	·0005	5·98
13. 58—21. 58	8·00	−·0044	−·0113	−·0904	−·0972	8·00	−·0113	3	·0006	·0015	2·67
0. 16— 9. 58	9·70	+·0016	+·0041	+·0398	+·0398	9·70	+·0041	9	·0002	·0005	1·08
5. 58— 8. 28	2·50	+·0003	+·0008	+·0020				2	·0003	·0008	1·25
8. 28—13. 58	5·50	−·0005	−·0013	−·0052	−·0052	8·00	−·0007	7	·0003	·0008	1·14
9. 58—19. 58	10·00	+0·0003	+0·0008	+0·0080	+0·0080	10·00	+0·0008	4	0·0003	0·0008	2·50
1. 47—17. 58	16·18	−·0005	−·0013	−·0211	−·0211	16·18	−·0013	13	·0002	·0005	1·24
3. 58—17. 58	14·00	−·0002	−·0005	−·0070	−·0070	14·00	−·0005	4	·0003	·0008	3·50
7. 58—14. 8	6·17	−·0004	−·0010	−·0062	·0062	6·17	−·0010	5	·0001	·0003	1·23
1. 48—15. 58	14·17	+·0012	+·0031	+·0439	+·0439	14·17	+·0031	21	·0003	·0008	0·52

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
1846.	h m h m	h	′				h			′		h
May 12	4. 0— 6. 14	2·23	+ 2·0	+0·0006	+0·0013				2	1·3	0·0004	1·12
	6. 14—12. 2	5·80	− 2·3	− ·0007	− ·0041	−0·0009	10·00	−0·0001	9	4·6	·0013	0·64
	12. 2 —14. 0	1·97	+ 3·5	+ ·0010	+ ·0019				2	5·9	·0017	0·99
July 11												
Aug. 6	12. 0—15. 25	3·42	+10·2	+ ·0030	+ ·0102				4	3·4	·0010	0·86
	15. 25 —20. 23	4·97	− 3·9	− ·0011	− ·0055	+ ·0099	11·86	+ ·0008	11	2·0	·0006	0·45
	20. 23—23. 51	3·47	+ 5·1	+ ·0015	+ ·0052				17	1·3	·0004	0·20
„ 7	0. 0—22. 0	22·00	+ 4·5	+ ·0013	+ ·0286	+ ·0286	22·00	+ ·0013	64	1·1	·0003	0·34
„ 24	8. 0—14. 25	6·42	− 3·9	− ·0011	− ·0070				3	3·9	·0011	2·14
	14. 25—15. 39	1·23	+ 0·5	+ ·0001	+ ·0001	− ·0107	14·00	− ·0008	2	2·4	·0007	0·62
	15. 39—22. 0	6·35	− 2·0	− ·0006	− ·0038				4	2·3	·0007	1·59
„ 25	0. 0—16. 0	16·00	− 2·1	− ·0006	− ·0096	− ·0096	16·00	− ·0006	5	2·3	·0007	3·20
„ 28	8. 0 —13. 45	5·75	− 4·4	− ·0013	− ·0075				11	2·3	·0007	0·52
	13. 45—16. 1	2·27	− 4·8	+ ·0014	+ ·0032	− ·0058	8·77	− ·0007	7	2·7	·0008	0·32
	16. 1—16. 46	0·75	− 6·9	− ·0020	− ·0015				10	0·7	·0002	0·88
Sept. 4	8. 0—13. 29	5·48	− 3·4	− ·0010	− ·0055	+ ·0091	15·85	+ ·0006	4	4·9	·0014	1·37
	13. 29—23. 51	10·37	− 4·8	+ ·0014	+ ·0146				22	1·9	·0006	0·49
„ 5	0. 0— 3. 57	3·95	+ 6·8	+ ·0020	+ ·0079				20	1·4	·0004	0·20
	3. 57— 6. 52	2·92	− 2·0	− ·0006	− ·0018	+ ·0056	12·97	+ ·0004	2	9·3	·0027	1·46
	6. 52— 9. 28	2·60	+ 3·0	+ ·0009	+ ·0023				4	3·7	·0011	0·65
	9. 28—12. 58	3·50	− 2·8	− ·0008	− ·0028				6	4·4	·0013	0·58
„ 10	10. 0—17. 0	7·00	− 4·6	− ·0013	− ·0091	+ ·0005	13·87	·0000	3	2·3	·0007	2·33
	17. 0—23. 52	6·87	− 4·8	+ ·0014	+ ·0096				3	3·3	·0010	2·29
„ 11	0. 0— 3. 53	3·88	+ 5·6	+ ·0016	+ ·0062				7	2·1	·0006	0·55
	3. 53— 8. 47	4·90	−13·2	− ·0038	− ·0186				8	6·9	·0020	0·61
	8. 47—18. 18	9·52	+ 1·8	+ ·0005	+ ·0048	− ·0030	23·85	− ·0001	7	3·9	·0011	1·36
	18. 18—18. 39	0·35	− 0·2	− ·0001	·0000				1	0·5	·0001	0·35
	18. 39—23. 48	5·15	− 3·1	+ ·0009	+ ·0046				5	1·8	·0005	1·03
„ 21	4. 0—18. 38	14·63	− 9·0	− ·0026	− ·0389	− ·0280	19·86	− ·0014	20	2·3	·0007	0·73
	18. 38—23. 52	5·23	− 6·2	+ ·0018	+ ·0094				3	3·6	·0010	1·74
„ 22	0. 0— 3. 26	3·43	+ 5·5	+ ·0016	+ ·0055				25	2·2	·0006	0·14
	3. 26— 4. 3	0·63	− 0·7	− ·0002	− ·0001				2	3·8	·0011	0·31
	4. 3— 5. 35	1·53	+ 3·9	+ ·0011	+ ·0017	− ·0158	13·99	− ·0011	19	5·0	·0015	0·15
	5. 35— 5. 54	0·32	− 0·5	− ·0001	·0000				2	2·5	·0007	0·16
	5. 54— 7. 18	1·40	+ 6·3	+ ·0018	+ ·0025				5	10·6	·0031	0·28
	7. 19—14. 0	6·68	−13·2	− ·0038	− ·0254				24	3·9	·0011	0·28
Oct. 2	4. 0—10. 0	6·00	− 8·8	− ·0026	− ·0156	− ·0156	6·00	− ·0026	8	3·8	·0011	0·75
„ 7	6. 0 16. 48	10·80	− 5·9	− ·0017	− ·0184	− ·0073	17·73	− ·0004	12	5·5	·0016	0·90
	16. 48—23. 44	6·93	+ 5·4	+ ·0016	+ ·0111				13	4·0	·0012	0·53
„ 8	0. 0— 3. 14	3·23	+ 9·4	+ ·0027	+ ·0087				12	1·6	·0005	0·27
	3. 14— 3. 47	0·55	− 1·6	− ·0005	− ·0003				3	5·3	·0015	0·18
	3. 47— 4. 53	1·10	+ 3·5	+ ·0010	+ ·0011	+ ·0059	12·00	+ ·0005	5	2·2	·0006	0·22
	4. 53— 8. 2	3·15	− 6·6	− ·0019	− ·0060				7	3·6	·0010	0·45
	8. 2—12. 0	3·97	+ 2·1	+ ·0006	+ ·0024				2	1·0	·0003	1·99
Nov. 26	1. 52— 7. 4	5·23	+ 5·6	+ ·0016	+ ·0084	− ·0069	16·16	− ·0004	11	3·2	·0009	0·48
	7. 4—18. 0	10·93	− 4·9	− ·0014	− ·0153				17	3·1	·0009	0·64
Dec. 23	4. 0—14. 0	10·00	− 5·5	− ·0016	− ·0160	− ·0160	10·00	− ·0016	12	4·7	·0014	0·83

HORIZONTA Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregat Disturbance by Wave
h m h m	h		
4. 2— 6. 48	2·77	+0·0010	+0·0028
6. 48—14. 2	7·23	− ·0010	− ·0072
0. 2— 2. 33	2·52	+ ·0005	+ ·0017
2. 33—10. 2	7·48	− ·0014	− ·0105
12. 2—16. 51	4·82	+ ·0010	+ ·0048
16. 51—23. 55	7·07	− ·0012	− ·0085
0. 2— 2. 27	2·42	− ·0012	− ·0029
2. 27— 3. 33	1·10	+ ·0002	+ ·0002
3. 33— 3. 57	0·40	− ·0001	·0000
3. 57—14. 2	10·08	+ ·0003	+ ·0030
14. 2—19. 2	5·00	− ·0004	− ·0020
19. 2—20. 59	1·95	+ ·0003	+ ·0006
21. 0—22. 2	1·03	− ·0002	− ·0002
10. 2—22. 2	12·00	− ·0003	− ·0036
0. 2— 5. 7	5·08	+ ·0007	+ ·0036
5. 7—10. 2	4·92	− ·0002	− ·0010
10. 2—16. 2	6·00	+ ·0004	+ ·0024
8. 2—10. 34	2·53	− ·0003	− ·0008
10. 34—10. 38	0·07	+ ·0002	·0000
10. 38—16. 46	6·13	− ·0011	− ·0067
8. 2 —11. 24	3·37	+ ·0006	+ ·0020
11. 24—23. 49	12·42	− ·0011	− ·0130
0. 2— 2. 1	1·98	− ·0014	− ·0028
2. 1— 6. 52	4·85	+ ·0017	+ ·0082
6. 52—12. 58	6·10	− ·0019	− ·0116
10. 2—15. 31	5·48	+ ·0005	+ ·0027
15. 31—20. 4	4·55	− ·0002	− ·0009
20. 4—23. 50	3·77	+ ·0003	+ ·0011
0. 2— 5. 14	5·20	− ·0008	− ·0042
5. 14— 6. 36	1·37	+ ·0014	+ ·0019
6. 36— 8. 37	2·02	− ·0005	− ·0010
8. 37—11. 28	2·85	+ ·0007	+ ·0020
11. 28—23. 48	12·33	− ·0011	− ·0135
4. 2— 8. 8	4·10	− ·0003	− ·0012
8. 8— 8. 52	0·73	+ ·0012	+ ·0009
8. 52—23. 52	15·00	− ·0012	− ·0180
0. 2— 1. 2	1·00	− ·0032	− ·0032
1. 2— 5. 2	4·00	+ ·0015	+ ·0060
5. 2—14. 2	9·00	− ·0037	− ·0333
4. 2— 10. 2	6·00	− ·0017	− ·0102
6. 2—15. 51	9·82	− ·0024	− ·0236
15. 51—16. 42	0·85	+ ·0008	+ ·0007
16. 42—23. 44	7·03	− ·0040	− ·0280
0. 13— 3. 7	2·90	− ·0016	− ·0046
3. 7— 3. 38	0·52	+ ·0008	+ ·0004
3. 38—12. 2	8·40	− ·0022	− ·0185
1. 52—10. 17	8·42	− ·0022	− ·0185
10. 17—10. 34	0·28	+ ·0002	+ ·0001
10. 34—16. 31	5·95	− ·0016	− ·0095
4. 2—14. 2	10·00	+ ·0017	+ ·0170

ORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in ne Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
−0·0044	10·00	−0·0004	3	0·0011	0·92
			12	·0008	0·60
− ·0092	10·00	− ·0009	2	·0037	1·26
			12	·0009	0·62
− ·0037	11·89	− ·0003	6	·0007	0·80
			29	·0005	0·24
			21	·0006	0·12
			5	·0005	0·22
			2	·0001	0·20
− ·0013	21·98	− ·0001	4	·0010	2·52
			4	·0008	1·25
			13	·0004	0·15
			6	·0005	0·17
− ·0036	12·00	− ·0003	9	·0006	1·33
			1	·0008	5·08
+ ·0050	16·00	+ ·0003	1	·0013	4·92
			3	·0013	2·00
			6	·0008	0·42
− ·0075	8·73	− ·0009	1	·0013	0·07
			17	·0007	0·36
− ·0116	15·79	− ·0007	2	·0006	1·69
			27	·0005	0·46
			12	·0007	0·16
− ·0262	12·93	− ·0005	16	·0007	0·30
			8	·0011	0·76
			1	·0023	5·48
− ·0029	13·83	+ ·0002	1	·0015	4·55
			4	·0005	0·94
			11	·0015	0·47
			4	·0015	0·34
− ·0148	23·[illegible]	− ·0006	4	·0008	0·51
			2	·0020	1·43
			10	·0008	1·23
			3	·0005	1·37
− ·0183	19·83	− ·0009	4	·0007	0·18
			11	·0011	1·36
			3	·0014	0·33
− ·0305	14·00	− ·0022	27	·0010	0·15
			29	·0013	0·31
− ·0102	6·00	− ·0017	11	·0009	0·55
			10	·0016	0·98
− ·0509	17·70	− ·0029	2	·0013	0·42
			16	·0007	0·44
			7	·0012	0·41
− ·0227	11·82	− ·0019	6	·0009	0·09
			16	·0007	0·53
			23	·0007	0·37
− ·0279	14·65	− ·0019	2	·0007	0·14
			4	·0013	1·49
− ·0170	10·00	+ ·0017	9	·0015	1·11

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
3. 58— 7. 54	3·93	+0·0004	+0·0010	+0·0039	−0·0040	10·00	−0·0004	1	0·0003	0·0008	3·93
7. 54—13. 58	6·07	− ·0005	− ·0013	− ·0079				3	·0005	·0013	2·02
0. 2— 3. 25	3·38	− ·0005	− ·0013	− ·0044	− ·0044	3·38	− ·0013	1	·0003	·0008	0·48
11. 58—17. 20	5·37	− ·0006	− ·0015	− ·0081	− ·0015	11·95	− ·0001	2	·0003	·0008	2·69
17. 20—23. 55	6·58	+ ·0004	+ ·0010	+ ·0066				5	·0002	·0005	1·32
0. 5— 4. 52	4·78	+ ·0003	+ ·0008	+ ·0038				7	·0001	·0003	0·68
4. 52—12. 10	7·30	− ·0002	− ·0005	− ·0036	+ ·0051	21·88	+ ·0002	1	·0011	·0028	7·30
12. 10—21. 58	9·80	+ ·0002	+ ·0005	+ ·0049				7	·0002	·0005	1·40
7. 58—23. 58	16·00	− ·0004	− ·0010	− ·0160	− ·0160	16·00	− ·0010	5	·0001	·0003	3·20
1. 48—15. 58	14·17	− ·0002	− ·0005	− ·0071	− ·0071	14·17	− ·0005	2	·0003	·0008	7·09
7. 58—16. 46	8·80	− ·0005	− ·0013	− ·0114	− ·0114	8·80	− ·0013	3	·0003	·0008	2·93
7. 58—23. 58	16·00	+ ·0005	+ ·0013	+ ·0208	+ ·0208	16·00	+ ·0013	5	·0002	·0005	3·20
0. 38— 9. 58	9·33	+ ·0012	+ ·0031	+ ·0289	+ ·0274	12·33	+ ·0022	6	·0005	·0013	1·56
9. 58—12. 58	3·00	− ·0002	− ·0005	− ·0015				1	·0006	·0015	3·00
9. 58—23. 58	14·00	+ ·0004	+ ·0010	+ ·0140	+ ·0140	14·00	+ ·0010	3	·0003	·0008	4·67
0. 7—13. 45	13·63	+ ·0006	+ ·0015	+ ·0204				7	·0005	·0013	1·95
13. 45—16. 4	2·32	− ·0002	− ·0005	− ·0012	+ ·0292	23·68	+ ·0012	1	·0000	·0000	2·32
16. 4—23. 48	7·73	+ ·0005	+ ·0013	+ ·0100				4	·0003	·0008	1·93
3. 58—23. 58	20·00	− ·0002	− ·0005	− ·0100	− ·0100	20·00	− ·0005	7	·0002	·0005	2·86
0. 4— 8. 8	8·06	+ ·0021	+ ·0054	+ ·0435	+ ·0225	13·89	+ ·0016	20	·0003	·0008	0·40
8. 8—13. 58	5·83	− ·0014	− ·0036	− ·0210				8	·0003	·0008	0·73
3. 58— 9. 58	6·00	+ ·0004	+ ·0010	+ ·0060	+ ·0060	6·00	+ ·0010	3	·0002	·0005	2·00
5. 58—23. 58	18·00	− ·0008	− ·0021	− ·0378	− ·0378	18·00	− ·0021	3	·0006	·0015	6·00
0. 13—11. 58	11·75	+ ·0030	+ ·0077	+ ·0905	+ ·0905	11·75	+ ·0077	5	·0002	·0005	2·35
1. 48— 9. 50	8·03	+ ·0005	+ ·0013	+ ·0104	− ·0002	16·16	·0000	4	·0006	·0015	2·01
9. 50—17. 58	8·13	− ·0005	− ·0013	− ·0106				3	·0003	·0008	2·71
3. 58—10. 10	6·20	+ ·0006	+ ·0015	+ ·0093	+ ·0074	10·00	+ ·0007	6	·0002	·0005	1·03
10. 10—13. 58	3·80	− ·0002	− ·0005	− ·0019				1	·0003	·0008	3·80

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
1847.	h m h m	h	′				h			′		h
Feb. 24	0 0— 1.52	1·87	5·2	+·0015	+·0023	−0·0167	10·00	−0·0017	9	0·7	·0002	·21
	1.52—10. 0	8·13	− 8·1	−·0024	−·0195				11	3·5	·0010	0·74
Mar. 1	4 — 7.31	3·52	− 4·7	+·0025	+·0083				25	1·0	·0005	0·14
	7.31— 7.50	0·32	− 3·5	−·0010	−·0013	−·0082	8·00	+·0010	2	11·4	·0033	0·16
	7.50— 9.31	1·68	+ 6·0	+·0017	+·0029				10	4·8	·0014	0·17
	9.31—12. 0	2·48	− 4·3	−·0013	−·0032				5	6·1	·0018	0·49
,, 19	0 — 4.48	4·80	− 4·6	−·0013	+·0062				8	4·1	·0012	0·60
	4.49— 5.41	·87	− 1·3	−·0005	−·0004				4	3·6	·0010	0·22
	5.41— 6.16	·58	+ 2·0	+·0006	+·0003				3	3·4	·0010	0·19
	6.16— 9.17	3·02	− 13·8	−·0055	−·0166				6	15·6	·0045	0·50
	9.17—12. 6	2·82	+ 2·5	+·0007	+·0018	−·0121	19·98	−·0009	7	6·3	·0018	0·42
	12. 6—15. 2	2·92	− 3·6	−·0011	−·0031				7	2·5	·0007	0·79
	15. 2—16.29	1·45	+ 5·1	+·0015	+·0022				3	7·7	·0022	0·48
	16.29—16.51	·37	−10·5	−·0031	−·0011				3	8·2	·0024	0·12
	16.51—20. 0	3·15	+ 1·8	+·0005	+·0019				8	3·3	·0010	0·39
April 3	4. 0—12. 2	8·03	− 1·2	−·0030	−·0243	−·0243	8·00	−·0030	15	4·9	·0014	0·53
,, 7	0 —15.33	9·65	− 4·8	−·0014	−·0135	−·0046	16·00	−·0003	11	3·3	·0010	0·88
	15.33—22. 0	6·55	+ 4·9	+·0014	+·0089				8	5·2	·0015	0·79
,, 21	4. 0— 6.30	2·50	+ 2·1	+·0006	+·0016				1	1·3	·0004	2·63
	6.37— 8. 3	1·43	− 1·7	−·0005	−·0012	+·0024	5·98	+·0001	8	5·8	·0017	0·18
	8. 3—10. 0	1·95	+ ·1	·0000	·0000				3	0·5	·0001	0·65
May 7	14. 0—22. 0	8·00	+ 14·8	+·0043	+·0344	+·0344	8·00	+·0043	6	5·0	·0015	1·33
June 24	3 57— 8. 0	4·05	− 9·3	+·0027	+·0109	−·0109	4·05	+·0027	3	5·3	·0015	1·35
July 9												
Sept. 24	0 0— 2.23	2·38	−17·0	−·0049	−·0117				37	3·9	·0011	0·06
	2.23— 2.24	·02	+ 0·2	+·0001	·0000				1	1·0	·0003	0·02
	2.25— 3.37	1·20	− 6·7	−·0019	−·0023				16	5·5	·0016	0·07
	3.37— 6. 2	2·42	+27·8	+·0081	+·0196				35	9·6	·0026	0·07
	6. 2— 8. 7	2·08	− 6·7	−·0019	−·0040	−·0082	17·98	+·0005	19	5·0	·0015	0·11
	8. 7— 9.18	1·20	+ 4·1	+·0012	+·0014				6	1·4	·0004	0·20
	9.18—10.15	0·93	− 2·0	−·0058	−·0054				12	9·9	·0029	0·08
	10.15—11. 0	0·75	+ 2·8	+·0008	+·0006				6	11·8	·0034	0·12
	11. 0—11.18	0·30	− 0·3	−·0001	−·0000				3	4·0	·0012	0·10
	11.18—18. 0	6·70	+ 5·3	+·0015	+·0100				18	5·0	·0015	0·52
,, 26	14. 0—22.17	8·28	− 6·7	−·0019	−·0157				7	3·6	·0010	1·18
	22.17—23.22	1·08	+ 0·8	+·0002	+·0002	−·0159	9·61	−·0046	2	3·9	·0011	0·54
	23.22—23.49	0·45	− 3·6	−·0010	−·0004				3	3·7	·0011	0·15
,, 27	0. 0— 5.37	5·62	− 1·1	+·0003	−·0017				9	3·5	·0010	0·62
	5.37— 8.19	2·70	− 3·1	−·0009	−·0024	−·0001	10·00	+·0001	4	6·0	·0017	0·68
	8.19—18. 0	1·68	− 3·2	+·0009	+·0015				3	7·0	·0022	0·56
Oct. 22	18. 0—21.41	3·68	− 0·4	−·0001	−·0004				1	2·3	·0007	3·68
	21.42—22. 4	·37	− 6·3	+·0018	+·0007				11	2·1	·0006	·03
	22. 5—22.11	·10	− 3·2	−·0009	−·0001	−·0053	3·78	+·0010	2	7·4	·0022	0·05
	22.11—23.49	1·63	+ 6·6	+·0019	+·0031				15	2·6	·0008	0·11
,, 23	0 — 0.26	·42	− 1·1	−·0003	−·0001				1	1·3	·0004	·42
	0.26— 0.35	·15	+ 0·3	+·0001	·0000				2	3·0	·0009	0·07
	0.35— 1.32	·95	− 3·8	−·0011	−·0011				7	2·7	·0008	0·13
	1.32— 1.47	·25	+ 2·1	+·0006	+·0002				2	1·6	·0005	0·13
	1.47— 2.22	·58	− 4·7	−·0014	−·0008	−·0031	11·94	−·0003	5	5·9	·0017	0·12
	2.23— 5.29	3·05	12·8	+·0037	+·0113				39	4·3	·0013	0·08
	5.27— 6.20	·88	− 3·5	−·0010	−·0009				7	3·2	·0009	0·13
	6.20— 7. 3	·72	− 8·2	+·0024	+·0017				7	6·1	·0018	0·10
	7. 3— 8.52	1·82	− 8·2	−·0024	−·0044				11	5·0	·0015	0·16
	8.53—18. 0	3·12	3·6	+·0011	+·0031				5	3·6	·0025	0·62
	Observations stopped for 4 hours.											
	22. 0—23.57	1·95	− 4·4	−·0013	−·0025	−·0025	1·95	−·0013	3	1·8	·0005	0·65

HORIZONTAL	Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
	h m h m	h		
	0. 2—10. 2	10·00	−0·0011	−0·0110
	4. 2— 7.11	3·15	+ ·0019	+ ·0060
	7.11—12. 2	4·85	− ·0022	− ·0107
	0. 2— 5.13	5·18	+ ·0011	+ ·0057
	5.13—20. 2	14·82	− ·0061	− ·0903
	4. 2— 9.42	5·67	− ·0011	− ·0062
	9.42—10. 8	0·43	+ ·0007	+ ·0003
	10. 8—12. 2	1·90	− ·0001	− ·0002
	6. 2— 9.44	3·70	− ·0003	+ ·0011
	9.44—22. 2	12·30	− ·0041	− ·0504
	4. 2— 9.30	5·47	− ·0022	− ·0120
	14. 2—17.46	3·73	+ ·0011	+ ·0041
	17.46—22. 2	4·27	− ·0017	− ·0073
	Values insufficient			
	12. 2—16. 2	4·00	− ·0088	− ·0352
	0. 2— 1.23	1·35	− ·0026	− ·0035
	1.24— 3.16	1·87	+ ·0132	+ ·0247
	3.16— 3.48	0·53	− ·0048	− ·0025
	3.48— 6.39	2·85	+ ·0307	+ ·0875
	6.39—18. 2	11·38	− ·0064	− ·0730
	18. 2—23.31	5·48	− ·0074	− ·0406
	23.31—23.49	0·30	+ ·0011	+ ·0003
	0. 2— 2.49	2·78	− ·0034	− ·0095
	2.50— 7.26	4·60	+ ·0047	+ ·0216
	7.26—12. 2	4·60	− ·0055	− ·0253
	Observations			
	22. 3—23.57	1·90	− 0·16	− 0·30

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
−0·0113	10·00	−0·0011	15	0·0007	0·67
−·0047	8·00	−·0006	23	·0006	0·14
			20	·0012	0·24
−·0846	20·00	−·0042	4	·0009	1·30
			32	·0015	0·48
			11	·0005	0·52
−·0061	8·00	−·0008	2	·0023	0·22
			5	·0027	0·38
−·0493	16·00	−·0031	4	·0018	0·93
			18	·0013	0·68
−·0120	5·47	−·0022	8	·0012	0·68
−·0032	8·00	−·0004	1	·0001	3·73
			3	·0015	1·42
for Reduction.					
−·0352	4·00	−·0088	8	·0017	0·50
			9	·0007	0·15
			40	·0028	0·05
+·0332	17·98	+·0018	4	·0020	0·13
			23	·0047	0·12
			52	·0018	0·22
−·0401	9·78	−·0041	15	·0009	0·65
−·0300	10·00	−·0030	12	·0010	0·83
−·0403	5·78	−·0070	29	·0014	0·19
			1	·0012	0·30
			12	·0025	0·23
−·0132	11·98	−·0011	43	·0018	0·11
			18	·0015	0·26
Stopped for 10 hours.					
−·0030	1·90	−·0016	1	·0021	1·90

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m — h m	h					h					h
0. 5— 9. 58	9·88	−0·0021	−0·0003	−0·0030	−0·0030	9·88	−0·0003	4	0·0002	0·0005	2·47
3. 58—11. 58	8·00	+·0030	+·0077	+·0616	+·0616	8·00	+·0078	16	·0003	·0008	0·50
1. 48— 9. 10	7·37	+·0013	+·0033	+·0243	−·0783	18·17	−·0043	9	·0004	·0010	0·82
9. 10—19. 58	10·80	−·0037	−·0095	−·1026				15	·0005	·0013	0·72
3. 58—11. 58	8·00	+·0013	+·0033	+·0264	+·0264	8·00	+·0033	3	·0005	·0013	2·67
5. 58— 9. 26	3·47	+·0002	+·0005	+·0017	−·0171	16·00	−·0011	2	·0002	·0005	1·74
9. 26—21. 58	12·53	−·0006	−·0015	−·0188				2	·0007	·0018	6·27
3. 58— 9. 58	6·00	+·0010	+·0026	+·0156	+·0156	6·00	+·0026	2	·0003	·0008	3·00
13. 58—23. 58	10·00	−·0004	−·0010	−·0100	−·0100	10·00	−·0010	2	·0002	·0005	5·00
Values insufficient for Reduction.											
11. 58—15. 58	4·00	−·0045	−·0116	−·0464	−·0464	4·00	−·0116	5	·0006	·0015	0·80
0. 59— 9. 43	8·73	+·0038	+·0098	+·0856	+·0435	16·98	+·0026	88	·0007	·0018	0·10
9. 43—17. 58	8·25	−·0020	−·0051	−·0421				31	·0008	·0021	0·27
13. 58—22. 16	8·30	−·0014	−·0036	−·0299	−·0260	10·00	−·0026	6	·0004	·0010	1·38
22. 16—23. 58	1·70	+·0009	+·0023	+·0039				3	·0003	·0008	0·57
0. 14— 9. 58	9·73	+·0024	+·0062	+·0603	+·0603	9·73	+·0062	10	·0008	·0021	0·97
17. 58—23. 58	6·00	−·0007	−·0018	−·0108	−·0108	6·00	−·0018	24	·0003	·0008	0·25
0. 22—10. 2	9·67	+·0043	+·0111	+·1073	+·0988	11·63	+·0085	55	·0005	·0013	0·18
10. 2—11. 58	1·93	−·0017	−·0044	−·0085				3	·0015	·0039	0·64
Observations stopped for 10 hours.											
21. 58—23. 58	2·0	+·0003	+·0008	+·0016	+·0016	2·00	+·0008	2	·0002	·0005	1·00

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1847.	h m h m	h	′				h			′		h	h m h m	h		
Oct. 24	0. 14 — 1. 24	1·17	+ 1·2	+0·0003	+0·0003				2	1·9	0·0006	0·59	0. 14— 1. 21	1·12	−0·0001	−0·0001
	1. 24— 9. 8	7·73	−11·3	− ·0033	− ·0255				44	6·6	·0019	0·17	1. 21— 1. 27	0·10	+ ·0004	·0000
	9. 8— 9. 40	0·53	+ 1·7	+ ·0005	+ ·0003				2	6·4	·0019	0·26	1. 27— 2. 11	0·73	− ·0014	− ·0010
	9. 40—10. 20	0·67	− 2·6	− ·0008	− ·0005	+0·0137	23·31	+0·0006	3	4·0	·0012	0·22	2. 11— 8. 1	5·83	+ ·0040	+ ·0233
	10. 20—11. 43	1·38	+20·0	+ ·0058	+ ·0080				11	11·2	·0033	0·12	8. 1—23. 33	15·53	− ·0149	− ·2310
	11. 43—13. 40	1·95	−16·6	− ·0048	− ·0094				11	8·8	·0026	0·18				
	13. 40—23. 33	9·88	+14·1	+ ·0041	+ ·0405				40	4·0	·0012	0·25				
,, 25	0. 0— 2. 0	2·00	− 0·8	− ·0002	− ·0004				1	4·4	·0013	2·00	0. 3—10. 2	9·98	− ·0015	− ·0150
	2. 0— 3. 4	1·07	+ 1·1	+ ·0003	+ ·0003				3	3·8	·0011	0·36				
	3. 4— 4. 9	1·08	− 1·3	− ·0004	− ·0004	− ·0093	10·00	− ·0009	3	7·2	·0021	0·36				
	4. 9— 4. 44	0·58	+ 1·3	+ ·0004	+ ·0002				2	3·8	·0011	0·29				
	4. 44— 10. 0	5·27	− 6·0	− ·0017	− ·0090				11	2·9	·0008	0·48				
Nov. 22	4. 0— 7. 36	3·60	+ 6·7	+ ·0019	+ ·0068				8	2·8	·0008	0·45	4. 2— 9. 37	5·58	+ ·0024	+ ·0134
	7. 36— 7. 53	0·28	− 2·5	− ·0007	− ·0002				3	4·9	·0014	0·09	9. 37—18. 3	8·43	− ·0052	− ·0438
	7. 53— 9. 44	1·85	+ 7·3	+ ·0021	+ ·0038				10	3·2	·0009	0·18				
	9. 45—11. 44	1·98	− 2·9	− ·0008	− ·0016	+ ·0120	13·98	+ ·0009	8	3·5	·0010	0·25				
	11. 44—16. 30	4·77	+ 4·7	+ ·0014	+ ·0067				3	11·2	·0033	1·59				
	16. 30—18. 0	1·50	− 7·9	− ·0023	− ·0035				2	8·7	·0025	0·75				
Dec. 17	1. 57— 5. 48	3·85	+10·9	+ ·0032	+ ·0123				15	5·2	·0015	0·26	1. 58— 6. 52	4·90	+ ·0029	+ ·0142
	5. 48— 5. 58	0·17	− 0·6	− ·0002	·0000				2	1·8	·0005	0·09	6. 52—23. 58	17·10	− ·0024	− ·0410
	5. 58— 6. 55	0·95	+ 2·2	+ ·0006	+ ·0006				14	3·2	·0009	0·07				
	6. 56— 7. 2	0·10	− 3·2	− ·0009	− ·0001				3	14·8	·0043	0·03				
	7. 2— 7. 23	0·35	+ 3·6	+ ·0010	+ ·0003				6	9·8	·0029	0·06				
	7. 23— 7. 51	0·47	− 2·4	− ·0007	− ·0003				6	3·0	·0009	0·08				
	7. 51— 9. 15	1·40	+ 6·2	+ ·0018	+ ·0025	+ ·0157	21·98	+ ·0007	9	4·9	·0014	0·16				
	9. 15—11. 7	1·87	− 2·9	− ·0008	− ·0015				8	9·1	·0026	0·23				
	11. 7—14. 10	3·05	+ 6·3	+ ·0018	+ ·0055				5	7·9	·0023	0·61				
	14. 10—15. 59	1·82	− 5·3	− ·0015	− ·0027				10	5·3	·0015	0·18				
	16. 0—18. 27	2·45	+ 3·4	+ ·0010	+ ·0024				4	3·2	·0009	0·61				
	18. 27—23. 57	5·50	− 1·9	− ·0006	− ·0033				4	2·6	·0008	1·38				
,, 18	0. 0— 2. 4	2·07	+ 2·3	+ ·0007	+ ·0014				8	2·7	·0008	0·26	0. 0—12. 3	12·05	− ·0016	− ·0193
	2. 4— 3. 5	1·02	− 1·5	− ·0004	− ·0004	− ·0120	12·02	− ·0010	7	3·1	·0009	0·14				
	3. 5— 3. 58	0·88	+ 2·8	+ ·0008	+ ·0007				10	2·1	·0006	0·09				
	3. 59—12. 2	8·05	− 5·7	− ·0017	− ·0137				4	9·4	·0027	2·01				
,, 19	13. 57—21. 11	7·23	+14·6	+ ·0042	+ ·0304	+ ·0175	9·98	+ ·0017	44	4·9	·0014	0·16	13. 58—23. 58	10·00	− ·0091	− ·0910
	21. 12—23. 57	2·75	−16·0	− ·0047	− ·0129				22	4·8	·0014	0·13				
,, 20	0. 0— 1. 35	1·58	−14·5	− ·0042	− ·0066				8	5·5	·0016	0·20	0. 0— 0. 24	0·40	+ ·0015	+ ·0006
	1. 35— 4. 25	2·83	+13·2	+ ·0038	+ ·0108				30	11·3	·0033	0·09	0. 24— 1. 59	1·58	− ·0005	− ·0008
	4. 25— 5. 32	1·12	−17·1	− ·0050	− ·0056				13	10·1	·0029	0·09	1. 59— 5. 1	3·03	+ ·0110	+ ·0333
	5 32— 6. 36	1·07	+ 5·9	+ ·0017	+ ·0018				9	4·5	·0013	0·12	5. 1— 5. 29	0·47	− ·0056	− ·0026
	6. 36—10. 15	3·65	−10·1	− ·0029	− ·0106				23	11·1	·0032	0·16	5. 29— 5. 59	0·50	+ ·0018	+ ·0009
	10. 15—10. 38	0·38	+ 0·5	+ ·0001	·0000	− ·0132	18·01	− ·0007	1	5·8	·0017	0·38	5. 59—18. 3	12·07	− ·0074	− ·0895
	10. 38—11. 57	1·33	− 3·3	− ·0010	− ·0013				4	8·8	·0026	0·33				
	11. 58—12. 8	0·17	+ 0·4	+ ·0001	·0000				2	3·3	·0010	0·09				
	12. 8—15. 58	3·83	− 3·9	− ·0011	− ·0042				4	4·1	·0012	0·96				
	15. 59—18. 2	2·05	+ 4·0	+ ·0012	+ ·0025				3	1·5	·0004	0·68				
1848.																
Jan. 16	0. 42— 4. 34	3·87	+ 5·8	+0·0017	+0·0066	−0·0047	14·17	−0·0003	5	9·3	0·0027	0·77	3. 47—14. 7	10·33	−0·0033	−0·0340
	4. 34—14. 52	10·30	− 3·8	− ·0011	− ·0113				16	9·4	·0027	0·64				
,, 28	9. 40—20. 0	10·33	− 8·7	− ·0025	− ·0258	− ·0210	14·03	− ·0015	13	8·4	·0024	0·79	4. 45—12. 18	7·55	+ ·0039	+ ·0294
	20. 0—23. 42	3·70	+ 4·6	+ ·0013	+ ·0048				5	3·0	·0009	0·74	12. 18—17. 0	4·70	− ·0014	− ·0066
													17. 0—19. 25	2·42	+ ·0001	+ ·0002
													19. 25—23. 51	4·43	− ·0003	− ·0013
Feb. 20	1. 10— 4. 45	3·58	+ 2·5	+ ·0007	+ ·0025				2	5·6	·0016	1·79	9. 50—18. 53	9·05	− ·0037	− ·0335
	4. 45— 8. 16	3·52	− 3·0	− ·0009	− ·0032				6	5·5	·0016	0·59				
	8. 16— 9. 1	0·75	+ 0·5	+ ·0001	+ ·0001	− ·0192	22·53	− ·0009	1	5·3	·0015	0·75				
	9. 1—18. 16	9·25	− 9·3	− ·0027	− ·0250				17	5·1	·0015	0·54				
	18. 16—22. 46	4·50	+ 5·0	+ ·0015	+ ·0068				8	6·7	·0019	0·56				
	22. 46—23. 42	0·93	− 1·5	− ·0004	− ·0004				1	7·7	·0022	0·93				
,, 21	0. 30— 8. 4	7·57	+ 5·0	+ ·0015	+ ·0114				15	10·4	·0030	0·50	0. 20—17. 51	17·52	− ·0047	− ·0823
	8. 4—11. 35	3·52	− 4·2	− ·0012	− ·0042				8	14·3	·0042	0·44	17. 51—21. 56	4·08	+ ·0027	+ ·0110
	11. 35—14. 54	3·32	+ 4·3	+ ·0013	+ ·0043	+ ·0047	16·91	+ ·0003	5	8·9	·0026	0·66	21. 56—23. 8	1·20	− ·0024	− ·0029
	14. 54—17. 24	2·50	− 9·2	− ·0027	− ·0068				7	13·1	·0038	0·36				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			1	0·0023	1·12
			2	·0032	0·05
−0·2088	23·31	−0·0090	5	·0015	0·15
			29	·0014	0·20
			91	·0028	0·17
− ·0150	9·98	− ·0015	17	·0011	0·59
			20	·0008	0·28
− ·0304	14·01	− ·0022	26	·0011	0·32
			12	·0014	0·41
− ·0268	22·00	− ·0012	27	·0015	0·63
− ·0193	12·05	− ·0016	21	·0011	0·57
− ·0910	10·00	− ·0091	44	·0022	0·23
			1	·0027	0·40
			6	·0034	0·26
− ·0581	18·05	− ·0032	15	·0039	0·20
			4	·0024	0·12
			3	·0060	0·17
			35	·0031	0·34
−0·0340	10·33	−0·0033	21	0·0018	0·49
			5	·0017	1·51
			7	·0031	0·67
+ ·0217	19·10	+ ·0011	4	·0019	0·61
			3	·0016	1·48
− ·0335	9·05	− ·0037	16	·0021	0·57
			27	·0034	0·65
− ·0742	22·80	− ·0033	19	·0043	0·22
			3	·0034	0·40

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
0. 14— 8. 48	8·57	+0·0033	+0·0085	+0·0728				26	0·0007	0·0018	0·33
8. 48—10. 10	1·37	− ·0005	− ·0013	− ·0018				5	·0009	·0023	0·27
10. 10—10. 24	0·23	+ ·0002	+ ·0005	+ ·0001				2	·0005	·0013	0·11
10. 24—14. 36	4·20	− ·0025	− ·0064	− ·0269	+0·0538	23·73	+0·0023	27	·0011	·0028	0·16
14. 36—19. 50	5·23	+ ·0005	+ ·0013	+ ·0068				13	·0006	·0015	0·40
19. 50—21. 4	1·23	− ·0005	− ·0013	− ·0016				11	·0003	·0008	0·11
21. 4—23. 58	2·90	+ ·0006	+ ·0015	+ ·0044				10	·0003	·0008	0·29
0. 29— 9. 58	9·48	+ ·0027	+ ·0069	+ ·0654	+ ·0654	9·48	+ ·0069	7	·0007	·0018	1·35
3. 58—11. 12	7·23	+ ·0017	+ ·0044	+ ·0318	− ·0421	15·18	− ·0028	10	·0009	·0023	0·72
11. 12—19. 9	7·95	− ·0036	− ·0093	− ·0739				5	·0012	·0031	1·59
1. 58—15. 58	14·00	+ ·0035	+ ·0090	+ ·1260	+ ·1260	14·00	+ ·0090	33	·0006	·0015	0·42
Values insufficient for Reduction.											
Values insufficient for Reduction.											
Values insufficient for Reduction.											

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1848.	h m h m	h	′			h				′		h	h m h m	h		
Feb. 22	8. 48—11. 44	2·93	− 5·2	−0·0015	−0·0044	−0·0043	4·01	−0·0010	3	9·1	0·0026	0·98	8. 52—12. 53	4·02	−0·0031	−0·0125
	11. 44—12. 49	1·08	+ 0·4	+ ·0001	+ ·0001				1	6·6	·0019	1·08				
„ 23	3. 42—16. 5	12·38	− 4·7	− ·0014	− ·0174	− ·0113	17·96	− ·0006	8	4·4	·0013	1·55	2. 42— 5. 33	2·85	− ·0004	− ·0011
	16. 5—21. 40	5·58	+ 3·1	+ ·0011	+ ·0061				8	7·7	·0022	0·70	5. 33— 6. 20	0·78	+ ·0002	+ ·0002
													6. 20—11. 15	4·92	− ·0003	− ·0015
„ 24	3. 7—10. 46	7·65	+ 5·4	+ ·0016	+ ·0122				13	6·7	·0019	0·59	0. 18— 2. 6	1·80	− ·0020	− ·0036
	10. 46—12. 44	1·97	− 3·5	− ·0010	− ·0020	+ ·0335	20·75	+ ·0016	4	1·6	·0005	0·66	2. 6— 3. 58	1·87	+ ·0006	+ ·0011
	12. 44—23. 52	11·13	+ 7·2	+ ·0021	+ ·0233				7	8·0	·0023	1·59	3. 58—23. 5	19·12	− ·0025	− ·0478
Mar. 17	3. 45— 7. 5	3·33	+ 7·9	+ ·0023	+ ·0077	+ ·0077	3·33	+ ·0023	4	3·1	·0009	0·83	3. 36— 5. 10	1·57	+ ·0008	+ ·0013
													5. 10— 8. 48	3·63	− ·0022	− ·0080
„ 20	2. 5— 5. 13	3·13	+ 4·2	+ ·0012	+ ·0038				5	5·2	·0015	0·63	4. 51—16. 18	11·45	− ·0027	− ·0309
	5. 13— 8. 4	2·85	− 3·5	− ·0010	− ·0029				4	11·6	·0034	0·71				
	8. 4— 8. 38	0·57	+ 1·7	+ ·0005	+ ·0003	− ·0126	14·22	− ·0009	3	9·5	·0028	0·19				
	8. 38—16. 18	7·67	− 6·1	− ·0018	− ·0138				16	5·5	·0016	0·48				
April 7	3. 12— 8. 10	4·97	+ 4·3	+ ·0013	+ ·0065				8	8·1	·0024	0·62	7. 12— 7. 40	0·47	+ ·0011	+ ·0005
	8. 10—12. 11	4·02	− 2·6	− ·0008	− ·0032	+ ·0045	11·42	+ ·0004	12	5·3	·0015	0·33	7. 40—11. 15	3·58	− ·0022	− ·0079
	12. 11—14. 37	2·43	+ 1·6	+ ·0005	+ ·0012				1	5·3	·0015	2·43				
May 18	6. 17— 8. 32	2·25	+ 4·1	+ ·0012	+ ·0027				7	4·7	·0014	0·32	6. 14—12. 56	6·70	+ ·0017	+ ·0114
	8. 32— 9. 9	0·62	− 0·1	·0000	·0000	− ·0016	9·06	− ·0002	1	0·5	·0001	0·62	12. 56—14. 48	1·87	− ·0005	− ·0009
	9. 9—12. 31	3·37	+ 1·3	+ ·0004	+ ·0013				7	2·2	·0006	0·48				
	12. 31—15. 20	2·82	− 2·0	− ·0020	− ·0056				5	6·3	·0018	0·56				
July 11	0. 27— 3. 58	3·52	− 0·2	− ·0001	− ·0004				2	2·4	·0007	1·76	1. 30— 8. 21	6·85	+ ·0020	+ ·0137
	3. 58— 8. 20	4·37	+ 4·4	+ ·0013	+ ·0057				5	7·1	·0021	0·87	8. 21—20. 54	12·55	− ·0044	− ·0552
	8. 20—10. 18	1·97	− 4·6	− ·0013	− ·0026				5	5·7	·0017	0·39				
	10. 18—11. 19	1·02	+ 1·9	+ ·0006	+ ·0006	− ·0054	16·43	− ·0003	3	6·4	·0019	0·34				
	11. 19—16. 16	4·95	− 6·2	− ·0018	− ·0089				13	6·4	·0019	0·38				
	16. 16—16. 52	0·60	+ 1·2	+ ·0003	+ ·0002				5	3·1	·0009	0·12				
Oct. 18	1. 52— 8. 26	6·57	+ 6·8	+ ·0020	+ ·0131				9	7·1	·0021	0·73	1. 42— 3. 52	2·17	− ·0012	− ·0026
	8. 26— 9. 13	0·78	− 0·1	·0000	·0000				1	6·9	·0020	0·78	3. 52— 7. 35	3·72	+ ·0007	+ ·0026
	9. 13—10. 27	1·23	+ 6·8	+ ·0020	+ ·0025	+ ·0024	11·51	+ ·0002	3	15·3	·0045	0·41	7. 35—12. 15	4·67	− ·0058	− ·0271
	10. 27—13. 22	2·93	−15·6	− ·0045	− ·0132				8	14·4	·0042	0·37				
„ 23	2. 54— 5. 1	2·12	+10·1	+ ·0029	+ ·0061				4	6·0	·0017	0·53	3. 42— 6. 15	2·55	+ ·0026	+ ·0066
	5. 1— 5. 55	0·90	− 3·0	− ·0009	− ·0008				3	13·7	·0040	0·30	6. 15—12. 31	6·27	− ·0024	− ·0150
	5. 55— 7. 5	1·17	+ 2·8	+ ·0008	+ ·0009	− ·0060	10·61	− ·0006	5	4·6	·0013	0·23	12. 31—13. 33	1·03	+ ·0017	+ ·0018
	7. 5—13. 30	6·42	− 6·5	− ·0019	− ·0122				11	8·1	·0024	0·58				
„ 25	1. 46— 7. 4	5·30	+ 2·5	+ ·0007	+ ·0037				13	4·6	·0013	0·41	1. 40— 4. 14	2·57	+ ·0019	+ ·0049
	7. 4—16. 42	9·63	− 3·3	− ·0010	− ·0096	− ·0034	17·46	− ·0002	5	6·1	·0018	1·93	4. 14—11. 13	6·98	− ·0008	− ·0056
	16. 42—19. 14	2·53	+ 3·3	+ ·0010	+ ·0025				2	3·4	·0010	1·27	11. 13—15. 25	4·20	+ ·0010	+ ·0042
													15. 25—20. 12	4·78	− ·0002	− ·0010
„ 29	1. 25—12. 32	11·12	+ 1·3	+ ·0004	+ ·0044	− ·0041	16·12	− ·0002	8	2·9	·0008	1·39	13. 40—18. 5	4·42	·0000	·0000
	12. 32—17. 32	5·00	− 5·9	− ·0017	− ·0085				3	13·3	·0039	1·67				
Nov. 17	1. 0— 8. 1	7·02	+12·4	+ ·0036	+ ·0253				13	5·8	·0017	0·54	1. 20— 2. 37	1·28	− ·0006	− ·0008
	8. 1— 9. 38	1·62	− 3·0	− ·0009	− ·0015				4	8·7	·0025	0·40	2. 37— 3. 43	1·10	+ ·0003	+ ·0003
	9. 38— 9. 57	0·32	+ 8·1	+ ·0024	+ ·0007				3	14·6	·0042	0·11	3. 43—20. 40	16·95	− ·0115	− ·1950
	9. 57—13. 33	3·60	−28·2	− ·0082	− ·0295	− ·0003	20·00	·0000	4	20·9	·0061	0·90				
	13. 33—14. 6	0·55	+ 9·0	+ ·0026	+ ·0014				1	8·7	·0025	0·55				
	14. 7—16. 53	2·77	− 4·2	− ·0012	− ·0033				10	15·7	·0046	0·28				
	16. 53—21. 0	4·12	+ 5·4	+ ·0016	+ ·0066				3	6·0	·0017	1·37				
„ 18	0. 15—10. 30	10·25	− 8·1	− ·0024	− ·0246				12	5·9	·0017	0·85	1. 36— 8. 30	6·90	− ·0025	− ·0172
	10. 30—11. 52	1·37	+ 1·3	+ ·0004	+ ·0005	− ·0266	14·15	− ·0019	3	3·5	·0010	0·46	8. 30— 9. 42	1·20	+ ·0029	+ ·0035
	11. 52—14. 24	2·53	− 3·4	− ·0010	− ·0025				2	6·2	·0018	1·27	9. 42—11. 54	2·20	− ·0029	− ·0064
Dec. 17	3. 7— 8. 12	5·08	+ 5·7	+ ·0017	+ ·0086	+ ·0011	9·51	+ ·0001	9	5·0	·0015	0·56	6. 38—12. 10	5·53	− ·0035	− ·0194
	8. 12—12. 38	4·43	− 5·8	− ·0017	− ·0075				10	9·0	·0026	0·44				
1849.																
Oct. 30	1. 0— 8. 42	7·70	+ 1·1	+0·0003	+0·0023				1	4·6	0·0013	7·70	1. 0—12. 25	11·42	+0·0003	+0·0034
	8. 42—18. 6	9·40	− 6·3	− ·0018	− ·0169	−0·0129	22·92	−0·0006	17	4·0	·0012	0·55	12. 25—23. 50	11·42	− ·0017	− ·0194
	18. 6—23. 55	5·82	+ 1·0	+ ·0003	+ ·0017				1	7·5	·0022	5·82				
Nov. 27	0. 50— 8. 27	7·62	+ 1·6	+ ·0005	+ ·0038				2	2·3	·0007	3·81	1. 30— 8. 41	7·18	− ·0003	− ·0022
	8. 27— 8. 56	0·48	− 1·8	− ·0005	− ·0002	+ ·0291	23·08	+ ·0013	1	7·8	·0023	0·48	8. 41—14. 25	5·73	+ ·0002	+ ·0011
	8. 56—23. 55	14·98	+ 5·9	+ ·0017	+ ·0255				8	5·3	·0015	1·87	14. 25—23. 55	9·50	− ·0026	− ·0247

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
−0·0125	4·02	−0·0031	5	0·0017	0·80
			1	·0003	2·85
− ·0024	8·55	− ·0003	3	·0024	0·26
			8	·0022	0·61
			1	·0010	1·80
− ·0503	22·79	− ·0022	3	·0022	0·62
			17	·0020	1·12
			1	·0001	1·57
− ·0067	5·20	− ·0013	6	·0023	0·61
− ·0309	11·45	− ·0027	20	·0024	0·57
			1	·0032	0·47
− ·0074	4·05	− ·0018	8	·0026	0·45
			10	·0020	0·67
+ ·0105	8·57	+ ·0012	2	·0029	0·94
			10	·0028	0·69
− ·0415	19·40	− ·0021	15	·0022	0·84
			3	·0011	0·72
			5	·0029	0·74
− ·0271	10·56	− ·0026	10	·0049	0·47
			6	·0023	0·43
			12	·0020	0·52
− ·0066	9·85	− ·0007	1	·0012	1·03
			7	·0012	0·37
			9	·0016	0·78
+ ·0025	18·53	+ ·0001	5	·0009	0·84
			1	·0025	4·78
·0000	4·42	·0000	1	·0018	4·42
			2	·0025	0·64
− ·1955	19·33	− ·0101	3	·0019	0·37
			72	·0032	0·24
			10	·0015	0·69
− ·0201	10·30	− ·0020	3	·0033	0·40
			4	·0013	0·55
− ·0194	5·53	− ·0035	12	·0018	0·46
−0·0160	22·84	−0·0007	4	0·0029	2·86
			4	·0019	2·86
			3	·0011	2·39
− ·0258	22·41	− ·0012	2	·0014	2·87
			2	·0053	4·75

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
6. 5—13. 13	7·13	−0·0053	−0·0136	−0·0970	−0·0970	7·13	−0·0136	14	0·0015	0·0039	0·51
Values insufficient for Reduction.											
1. 47— 9. 2	7·25	+ ·0023	+ ·0059	+ ·0428				3	·0037	·0095	2·42
9. 2—10. 2	1·00	− ·0006	− ·0015	− ·0015				6	·0027	·0069	0·17
10. 2—10. 33	0·52	+ ·0020	+ ·0051	+ ·0027				3	·0053	·0136	0·17
10. 33—11. 12	0·65	− ·0013	− ·0033	− ·0021	+ ·0601	18·94	+ ·0032	2	·0025	·0064	0·33
11. 12—13. 31	2·32	+ ·0019	+ ·0049	+ ·0114				8	·0013	·0033	0·29
13. 31—15. 13	1·70	− ·0011	− ·0028	− ·0048				7	·0026	·0067	0·24
15. 13—20. 43	5·50	+ ·0008	+ ·0021	+ ·0116				12	·0013	·0033	0·46
8. 45—13. 0	4·25	+ ·0019	+ ·0049	+ ·0208	+ ·0208	4·25	+ ·0050	1	·0003	·0008	4·25
1. 40—12. 0	10·33	− ·0028	− ·0072	− ·0744	− ·0744	10·33	− ·0072	14	·0005	·0013	0·74
1. 0—23. 55	22·92	−0·0059	−0·0152	−0·3484	−0·3484	22·92	−0·0152	4	0·0004	0·0010	5·73
Values insufficient for Reduction.											

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTA Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1850.	h m h m	h	′				h			′		h	h m h m	h		
Feb. 22	0. 0— 8. 34	8·57	— 1·5	—0·0004	—0·0034				7	2·4	0·0007	1·22	0. 0— 6. 25	6·42	+0·0012	+0·0077
	8. 34— 9. 32	0·97	+ 0·4	+ ·0001	+ ·0001	—0·0076	23·67	—0·0003	2	5·9	·0017	0·49	6. 25—10. 30	4·08	— ·0003	— ·0012
	9. 32—17. 1	7·48	— 4·0	— ·0012	— ·0090				15	2·7	·0008	0·50	10. 30—11. 37	1·12	+ ·0001	+ ·0001
	17. 1—23. 40	6·65	+ 2·4	+ ·0007	+ ·0047				3	2·0	·0006	2·22	11. 37—23. 28	11·85	— ·0013	— ·0154
,, 23	0. 10— 7. 24	7·23	+ 4·7	+ ·0014	+ ·0101				15	6·0	·0017	0·48	0. 0— 1. 20	1·33	+ ·0002	+ ·0003
	7. 24— 8. 8	0·73	— 3·2	— ·0009	— ·0007				4	3·9	·0011	0·18	1. 20—23. 20	22·00	— ·0015	— ·0330
	8. 8— 8. 44	0·60	+ 4·8	+ ·0014	+ ·0008				4	4·3	·0012	0·15				
	8. 44—10. 16	1·53	— 1·0	— ·0003	— ·0005	+ ·0034	23·57	+ ·0001	6	5·8	·0017	0·26				
	10. 16—10. 51	0·58	+ 0·7	+ ·0002	+ ·0001				2	3·4	·0010	0·29				
	10. 51—23. 45	12·90	— 1·8	— ·0005	— ·0064				4	2·3	·0007	3·23				
Mar. 31	0. 5— 6. 45	6·67	+ 2·5	+ ·0007	+ ·0047				8	1·7	·0005	0·83	0. 3—23. 30	23·45	— ·0016	— ·0375
	6. 45—16. 32	9·78	— 5·1	— ·0015	— ·0147				18	3·6	·0010	0·54				
	16. 32—18. 2	1·50	+ 1·8	+ ·0005	+ ·0008	— ·0104	23·88	— ·0004	2	2·8	·0008	0·75				
	18. 2—23. 58	5·93	— 0·7	— ·0002	— ·0012				1	1·5	·0004	5·93				
May 7													0. 0— 6. 2	6·03	— ·0003	— ·0018
													6. 2—14. 12	8·17	+ ·0014	+ ·0114
													14. 12—23. 55	9·72	— ·0012	— ·0117
June 13	0. 0— 9. 7	9·12	+ 0·6	+ ·0002	+ ·0018				1	1·7	·0005	9·12	0. 0— 9. 51	9·85	+ ·0024	+ ·0236
	9. 7—23. 58	14·85	— 6·3	— ·0018	— ·0267	— ·0249	23·97	— ·0010	12	5·0	·0015	1·24	9. 51—23. 23	13·53	— ·0022	— ·0298
Oct. 1	0. 43—23. 57	23·23	+ 7·2	+ ·0021	+ ·0487	+ ·0487	23·23	+ ·0021	34	3·9	·0011	0·68	1. 0—23. 40	22·67	— ·0023	— ·0522
,, 2	0. 30— 6. 4	5·57	+ 0·7	+ ·0002	+ ·0011				5	3·9	·0011	1·11	0. 20—23. 55	23·58	— ·0021	— ·0491
	6. 4— 8. 1	1·95	— 1·6	— ·0005	— ·0010	+ ·0401	23·47	+ ·0017	4	6·2	·0018	0·49				
	8. 1—23. 58	15·95	+ 8·7	+ ·0025	+ ·0400				16	5·6	·0016	1·00				
1851.																
Jan. 16	0. 20— 2. 28	2·13	— 1·8	—0·0005	—0·0011				2	5·1	0·0015	1·06	0. 30—12. 24	11·90	+0·0027	+0·0321
	2. 28— 9. 40	7·20	+ 4·4	+ ·0013	+ ·0094	—0·0244	23·58	—0·0010	19	3·0	·0009	0·38	12. 24—23. 55	11·52	— ·0017	— ·0191
	9. 40—23. 55	14·25	— 7·9	— ·0023	— ·0327				22	5·4	·0016	0·65				
,, 19	0. 0—10. 31	10·52	— 0·9	— ·0003	— ·0032				8	1·7	·0005	1·32	0. 0—22. 5	22·08	+ ·0018	+ ·0394
	10. 31—11. 54	1·38	+ 1·6	+ ·0005	+ ·0007				3	5·1	·0015	0·46	22. 5—23. 59	1·90	— ·0037	— ·0074
	11. 54—15. 15	3·35	— 2·9	— ·0008	— ·0027	+ ·0175	23·97	+ ·0007	7	2·2	·0006	0·48				
	15. 15—23. 58	8·72	+ 8·8	+ ·0026	+ ·0227				19	3·9	·0011	0·46				
Feb. 18	0. 50— 9. 9	8·32	+ 3·0	+ ·0009	+ ·0075				6	1·2	·0003	1·39	0. 50—12. 55	12·08	+ ·0009	+ ·0109
	9. 9—12. 47	3·63	— 0·8	— ·0002	— ·0007				3	1·7	·0005	1·21	12. 55—23. 55	11·00	— ·0036	— ·0396
	12. 47—14. 10	1·38	+ 3·1	+ ·0009	+ ·0012	+ ·0082	23·13	+ ·0004	4	3·7	·0011	0·35				
	14. 10—16. 42	2·53	—10·6	— ·0031	— ·0078				4	11·9	·0035	0·63				
	16. 42—23. 58	7·27	+ 3·8	+ ·0011	+ ·0080				5	5·3	·0015	1·45				
Sept. 3	1. 0— 2. 12	1·20	+ 0·1	·0000	·0000				1	0·4	·0001	1·20	0. 30—10. 35	10·08	— ·0004	— ·0047
	2. 12— 3. 56	1·73	— 1·2	— ·0003	— ·0005				1	4·6	·0013	1·73	10. 35—17. 25	6·83	+ ·0007	+ ·0047
	3. 56— 5. 51	1·92	+ 0·9	+ ·0003	+ ·0006	+ ·0451	18·55	+ ·0024	1	4·5	·0013	1·92	17. 25—23. 54	6·48	— ·0067	— ·0431
	5. 51— 7. 52	2·02	— 1·0	— ·0003	— ·0006				2	2·4	·0007	1·01				
	7. 52—19. 33	11·68	+13·3	+ ·0039	+ ·0456				14	6·6	·0019	0·83				
,, 4	0. 32— 6. 41	6·15	+ 8·6	+ ·0025	+ ·0154				9	8·4	·0024	0·68	0. 3— 3. 29	3·43	— ·0032	— ·0111
	6. 41— 7. 30	0·82	— 4·7	— ·0014	— ·0011				3	6·1	·0018	0·27	3. 29— 4. 22	0·88	+ ·0004	+ ·0003
	7. 30— 7. 37	0·12	+ 1·0	+ ·0003	·0000				1	4·1	·0012	0·12	4. 22— 4. 46	0·40	— ·0002	— ·0008
	7. 37— 8. 34	0·95	— 2·4	— ·0007	— ·0007	+ ·0168	23·39	+ ·0006	4	9·1	·0026	0·24	4. 46— 7. 42	2·93	+ ·0035	+ ·0103
	8. 34— 9. 11	0·62	+ 1·5	+ ·0004	+ ·0002				2	3·9	·0011	0·31	7. 42—23. 55	16·22	— ·0014	— ·0225
	9. 11—11. 31	2·33	— 0·9	— ·0003	— ·0007				6	2·9	·0008	0·39				
	11. 31—23. 55	12·40	+ 1·0	+ ·0003	+ ·0037				4	4·1	·0012	3·10				
,, 6	0. 0—20. 23	20·38	— 9·0	— ·0026	— ·0330	— ·0465	23·98	— ·0019	14	5·8	·0017	1·46	0. 0— 6. 0	6·00	— ·0007	— ·0042
	20. 23—23. 59	3·60	+ 6·2	+ ·0018	+ ·0065				4	7·1	·0021	0·90	6. 0—16. 0	10·00	+ ·0007	+ ·0070
													16. 0—23. 50	7·83	— ·0034	— ·0266
,, 7	0. 2— 4. 33	4·52	+ 6·1	+ ·0018	+ ·0081				35	6·3	·0018	0·13	0. 7— 0. 56	0·82	— ·0056	— ·0046
	4. 33— 7. 4	2·52	— 6·7	— ·0019	— ·0048				16	8·2	·0024	0·16	0. 56— 3. 30	2·57	+ ·0051	+ ·0131
	7. 4— 7. 9	0·08	+ 5·4	+ ·0016	+ ·0001				2	3·4	·0010	0·04	3. 30— 3. 54	0·40	— ·0011	— ·0004
	7. 9— 9. 5	1·93	—14·4	— ·0042	— ·0081	— ·0052	22·96	— ·0002	8	11·5	·0033	0·24	3. 54— 6. 50	2·93	+ ·0044	+ ·0128
	9. 5—10. 31	1·43	+ 4·8	+ ·0014	+ ·0020				8	6·7	·0019	0·18	6. 50— 7. 15	0·42	— ·0017	— ·0007
	10. 31—17. 16	6·75	— 6·6	— ·0019	— ·0128				17	2·9	·0008	0·40	7. 15— 7. 38	0·38	+ ·0016	+ ·0060
	17. 16—23. 0	5·73	+ 6·2	+ ·0018	+ ·0103				3	4·7	·0014	1·91	7. 38—23. 59	16·35	— ·0048	— ·0781

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
					h
			4	0·0024	1·61
			6	·0012	0·68
−0·0088	23·47	−0·0004	3	·0009	0·37
			13	·0013	0·91
			4	·0027	0·33
− ·0327	23·33	− ·0014	24	·0021	0·92
− ·0375	23·45	− ·0016	17	·0015	1·38
			1	·0012	6·03
− ·0021	23·92	− ·0001	8	·0001	1·02
			4	·0018	2·43
			5	·0016	1·97
− ·0062	23·38	− ·0003	9	·0014	1·50
− ·0522	22·67	− ·0023	30	·0013	0·76
− ·0495	23·58	− ·0021	25	·0016	0·94
+0·0125	23·42	+0·0005	21	0·0013	0·57
			15	·0011	0·77
			27	·0001	0·82
+ ·0328	23·98	+ ·0014	8	·0016	0·24
			12	·0007	1·01
− ·0287	23·08	− ·0012	27	·0012	0·41
			8	·0003	1·26
− ·0426	23·39	− ·0018	4	·0010	1·71
			16	·0009	0·40
			13	·0016	0·26
			6	·0010	0·15
− ·0232	23·86	− ·0009	2	·0006	0·20
			17	·0016	0·17
			25	·0012	0·65
			5	·0005	1·20
− ·0238	23·83	− ·0010	13	·0011	0·77
			22	·0018	0·36
			11	·0011	0·07
			15	·0016	0·17
			3	·0029	0·13
− ·0576	23·87	− ·0024	28	·0020	0·10
			3	·0006	0·14
			3	·0060	0·13
			43	·0016	0·38

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
0. 10—23. 30	23·33	+0·0034	+0·0087	+0·2030	+0·2030	23·33	+0·0087	5	0·0009	0·0023	4·67
0. 0— 4. 5	4·08	+ ·0001	+ ·0003	+ ·0012				1	·0001	·0003	4·08
4. 5—23. 30	19·42	− ·0006	− ·0015	− ·0291	− ·0279	23·50	− ·0012	2	·0024	·0062	9·71
0. 0—23. 15	23·25	·0000	·0000	·0000	·0000	23·25	·0000	1	·0028	·0072	23·25
Values insufficient for Reduction.											
0. 0—23. 40	23·67	− ·0064	− ·0164	− ·3882	− ·3882	23·67	− ·0164	4	·0007	·0018	5·92
1. 0—23. 0	22·00	− ·0021	− ·0054	− ·1188	− ·1188	22·00	− ·0054	8	·0006	·0015	2·75
0. 30— 7. 37	7·12	+ ·0003	+ ·0008	+ ·0057				5	·0007	·0018	1·42
7. 37—23. 5	15·47	− ·0004	− ·0010	− ·0155	− ·0098	22·59	− ·0004	2	·0001	·0003	7·73
0. 35—23. 30	22·92	−0·0017	−0·0044	−0·1009	−0·1009	22·92	−0·0044	4	0·0009	0·0023	5·73
0. 0—23. 10	23·17	− ·0023	− ·0059	− ·1367	− ·1367	23·17	− ·0059	6	·0005	·0013	3·86
0. 30—23. 55	23·42	+ ·0023	+ ·0059	+ ·1382	+ ·1382	23·42	+ ·0059	20	·0003	·0008	1·17
0. 39—18. 0	17·35	+ ·0021	+ ·0054	+ ·0937				16	·0003	·0008	1·08
18. 0—19. 58	1·97	− ·0011	− ·0028	− ·0055	+ ·1004	23·27	+ ·0043	14	·0004	·0010	0·14
19. 58—23. 55	3·95	+ ·0012	+ ·0031	+ ·0122				10	·0004	·0010	0·40
0. 57—23. 55	22·97	+ ·0030	+ ·0077	+ ·1769	+ ·1769	22·97	+ ·0077	42	·0004	·0010	0·55
0. 30— 8. 30	8·00	− ·0012	− ·0031	− ·0248				3	·0001	·0003	2·67
8. 30—13. 54	5·40	+ ·0005	+ ·0013	+ ·0070	− ·0508	23·42	− ·0022	4	·0008	·0021	1·35
13. 54—23. 55	10·02	− ·0013	− ·0033	− ·0330				40	·0003	·0008	0·25
0. 5— 7. 26	7·35	+ ·0030	+ ·0077	+ ·0566				52	·0006	·0015	0·14
7. 26—16. 30	9·07	− ·0049	− ·0126	− ·1143	− ·0481	23·84	− ·0020	31	·0006	·0015	0·29
16. 30—23. 55	7·42	+ ·0005	+ ·0013	+ ·0096				3	·0004	·0010	2·47

MONTH AND DAY.	DECLINATION MAGNET.											HORIZONTAL		
	Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1851.	h m h m	h	′			h				′		h	h m h m	h		
Sept. 29	1. 12 — 7. 40	6·47	−11·6	−0·0034	−0·0218				9	5·7	0·0017	0·72				
	7. 40— 8. 58	1·30	+ 3·2	+ ·0009	+ ·0012				3	3·1	·0009	0·43				
	8. 58—17. 9	8·18	−17·5	− ·0051	− ·0417	−0·0550	22·72	−0·0024	45	8·8	·0026	0·20				
	17. 9—20. 27	3·30	+ 4·7	+ ·0014	+ ·0046				5	7·7	·0022	0·66				
	20. 27—20. 30	0·05	− 1·3	− ·0004	·0000				1	13·5	·0039	0·05				
	20. 30—23. 55	3·42	+ 2·8	+ ·0008	+ ·0027				5	5·1	·0015	0·68				
Oct. 2	0. 15— 7. 27	7·20	+ 5·1	+ ·0015	+ ·0108				15	2·5	·0007	0·55	0. 0— 3. 33	3·55	− ·0006	− ·0021
	7. 27— 8. 45	1·30	− 3·4	− ·0010	− ·0013				4	3·8	·0011	0·32	3. 33— 3. 57	0·40	+ ·0002	+ ·0001
	8. 45— 9. 34	0·82	+ 4·5	+ ·0013	+ ·0011	+ ·0037	23·72	+ ·0002	4	11·8	·0034	0·20	3. 57— 8. 17	4·33	− ·0012	− ·0052
	9. 34—13. 49	4·25	−11·5	− ·0033	− ·0140				8	8·0	·0023	0·53	8. 17— 8. 49	0·53	+ ·0002	+ ·0001
	13. 49—23. 58	10·15	+ 2·5	+ ·0007	+ ·0071				4	2·0	·0006	2·54	8. 49—23. 58	15·15	− ·0037	− ·0561
,, 28	0. 32—14. 1	13·48	− 8·0	− ·0023	− ·0310	+ ·0152	23·10	+ ·0007	12	4·5	·0013	1·12	0. 30—10. 16	9·77	+ ·0009	+ ·0088
	14. 1—23. 38	9·62	+16·4	+ ·0048	+ ·0462				12	8·3	·0024	0·80	10. 16—14. 48	4·53	− ·0009	− ·0041
													14. 48—16. 45	1·95	+ ·0022	+ ·0043
													16. 45—23. 10	6·42	− ·0052	− ·0334
Dec. 6	0. 12— 7. 57	7·75	+ 3·6	+ ·0010	+ ·0078				4	2·2	·0006	1·94	0. 30—23. 55	23·42	− ·0054	− ·1264
	7. 57—14. 55	6·97	−15·7	− ·0046	− ·0321	− ·0307	23·30	− ·0013	31	6·6	·0019	0·22				
	14. 55—15. 19	0·40	+ 1·2	+ ·0003	+ ·0001				1	16·5	·0048	0·40				
	15. 19—23. 30	8·18	− 2·6	− ·0008	− ·0065				4	2·5	·0007	2·04				
,, 28	0. 3— 3. 44	3·68	+ 2·9	+ ·0008	+ ·0029				8	2·0	·0006	0·46	0. 2— 8. 24	8·37	− ·0022	− ·0184
	3. 44— 6. 0	2·27	− 4·6	− ·0013	− ·0030				6	4·5	·0013	0·38	8. 24—12. 35	4·18	+ ·0003	+ ·0013
	6. 0— 6. 15	0·25	+ 0·7	+ ·0002	+ ·0001	+ ·0083	23·15	+ ·0004	1	6·1	·0018	0·25	12. 35—23. 58	11·23	− ·0004	− ·0046
	6. 15— 8. 15	2·00	− 9·0	− ·0026	− ·0052				7	6·6	·0019	0·29				
	8. 15—23. 12	14·95	+ 3·1	+ ·0009	+ ·0135				14	2·6	·0008	1·07				
,, 29	3. 30— 6. 44	3·23	− 4·0	− ·0012	− ·0039				7	1·9	·0006	0·46	1. 30—23. 55	22·42	− ·0028	− ·0627
	6. 44— 8. 8	1·40	+ 5·1	+ ·0015	+ ·0021				6	3·1	·0009	0·23				
	8. 8—19. 52	11·73	−10·3	− ·0030	− ·0351	− ·0360	18·49	− ·0020	32	3·7	·0011	0·37				
	19. 52—22. 0	2·13	+ 1·3	+ ·0004	+ ·0009				2	3·5	·0010	1·06				
1852.																
Jan. 4	0. 0— 8. 37	8·62	+ 6·2	+0·0018	+0·0155				14	2·6	0·0008	0·62	0. 0—22. 0	22·00	+0·0044	+0·0968
	8. 37—12. 37	4·00	− 4·9	− ·0014	− ·0056	+0·0245	23·84	+0·0010	8	7·2	·0021	0·50				
	12. 37—23. 50	11·22	+ 4·3	+ ·0013	+ ·0146				16	1·5	·0004	0·70				
,, 19	1. 17—11. 19	10·03	+ 1·6	+ ·0005	+ ·0050				2	1·1	·0003	5·02	0. 50— 4. 8	3·30	− ·0008	− ·0026
	11. 19—13. 38	2·32	− 5·6	− ·0016	− ·0037				6	3·6	·0010	0·38	4. 8—10. 38	6·50	+ ·0009	+ ·0059
	13. 38—14. 48	1·17	+ 2·8	+ ·0008	+ ·0009				5	2·2	·0006	0·23	10. 38—18. 43	8·08	− ·0024	− ·0192
	14. 48—17. 44	2·93	− 2·2	− ·0006	− ·0018	+ ·0073	22·60	+ ·0003	8	4·5	·0013	0·37	18. 43—19. 23	0·67	+ ·0006	+ ·0004
	17. 45—21. 3	3·30	+ 6·8	+ ·0020	+ ·0066				7	6·6	·0019	0·47	19. 23—23. 59	4·60	− ·0039	− ·0179
	21. 3—21. 18	0·25	− 0·4	− ·0001	·0000				2	1·7	·0005	0·13				
	21. 18—23. 54	2·60	+ 0·5	+ ·0001	+ ·0003				1	2·7	·0008	2·60				
Feb. 14	1. 30—15. 0	13·50	+ 1·6	+ ·0005	+ ·0068				3	0·6	·0002	4·50	0. 30—21. 46	21·27	+ ·0036	+ ·0760
	15. 0—21. 35	6·58	− 1·4	− ·0004	− ·0026	− ·0073	22·27	− ·0003	5	1·1	·0003	1·32	21. 46—22. 52	1·10	− ·0024	− ·0026
	21. 35—22. 0	0·42	+ 3·2	+ ·0009	+ ·0004				4	8·8	·0026	0·10	22. 52—23. 40	0·80	+ ·0039	+ ·0031
	22. 0—23. 46	1·77	−23·0	− ·0067	− ·0119				8	5·7	·0017	0·22				
,, 15	0. 0— 0. 46	0·77	+ 1·7	+ ·0005	+ ·0004				2	2·3	·0007	0·39	0. 15— 3. 48	3·55	− ·0054	− ·0192
	0. 46— 6. 13	5·45	−11·5	− ·0033	− ·0180				23	4·8	·0014	0·24	3. 48—16. 1	12·22	+ ·0023	+ ·0281
	6. 13— 8. 27	2·23	+ 2·7	+ ·0008	+ ·0018				6	3·3	·0010	0·37	16. 1—23. 59	7·97	− ·0030	− ·0239
	8. 27—11. 4	2·62	− 2·1	− ·0006	− ·0016	+ ·0006	23·73	·0000	8	3·3	·0010	0·33				
	11. 4—21. 25	10·35	+ 5·7	+ ·0017	+ ·0176				47	3·1	·0009	0·22				
	21. 25—22. 36	1·18	− 1·9	− ·0006	− ·0007				9	2·0	·0006	0·13				
	22. 36—23. 44	1·13	+ 3·4	+ ·0010	+ ·0011				6	2·6	·0008	0·19				
,, 17	0. 40— 2. 14	1·57	+ 3·4	+ ·0010	+ ·0016				1	2·3	·0007	1·57	0. 29—14. 45	14·27	− ·0017	− ·0243
	2. 14—10. 32	8·30	− 3·9	− ·0011	− ·0091				22	2·2	·0006	0·38	14. 45—15. 29	0·73	+ ·0006	+ ·0004
	10. 32—18. 49	8·28	+ 4·1	+ ·0012	+ ·0099	− ·0021	23·31	− ·0001	20	3·8	·0011	0·41	15. 29—23. 36	8·12	− ·0027	− ·0219
	18. 49—19. 33	0·73	− 7·9	− ·0023	− ·0017				14	5·6	·0016	0·05	23. 36—23. 59	0·38	+ ·0024	+ ·0009
	19. 33—20. 20	0·78	+ 7·3	+ ·0021	+ ·0016				6	11·1	·0032	0·13				
	20. 20—23. 59	3·65	− 4·2	− ·0012	− ·0044				27	8·3	·0024	0·13				
,, 18	0. 5— 0. 31	0·43	+ 0·6	+ ·0002	+ ·0001				1	7·6	·0022	0·43	0. 0— 0. 4	0·07	+ ·0008	+ ·0001
	0. 31— 0. 53	0·37	− 1·2	− ·0003	− ·0001				2	5·7	·0017	0·18	0. 4— 1. 37	1·55	− ·0023	− ·0036
	0. 53— 4. 51	3·97	+ 3·0	+ ·0009	+ ·0036				20	4·9	·0014	0·20	1. 37— 5. 35	3·97	+ ·0057	+ ·0226
	4. 51— 5. 24	0·55	− 2·4	− ·0007	− ·0004	+ ·0031	23·89	+ ·0001	4	5·6	·0016	0·14	5. 35—23. 40	18·08	− ·0043	− ·0775
	5. 24— 6. 0	0·60	+ 0·7	+ ·0002	+ ·0001				3	2·9	·0008	0·20				
	6. 0—16. 45	10·75	− 3·9	− ·0011	− ·0118				33	4·7	·0014	0·33				
	16. 45—23. 58	7·22	+ 5·4	+ ·0016	+ ·0116				10	2·7	·0008	0·72				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			4	0·0003	0·87
−0·0474	23·87	−0·0020	42	·0007	0·18
			76	·0019	0·17
			9	·0007	0·39
			2	·0011	0·20
−·0632	23·96	−·0026	15	·0008	0·29
			2	·0036	0·27
			15	·0021	1·01
			13	·0007	0·75
			9	·0009	0·50
−·0244	22·67	−·0011	7	·0015	0·28
			17	·0013	0·38
−·1264	23·42	−·0054	51	·0012	0·46
			22	·0008	0·38
−·0217	23·93	−·0009	9	·0010	0·46
			6	·0007	1·90
−·0627	22·42	−·0028	52	·0009	0·43
+0·0968	22·00	+0·0044	22	0·0009	1·00
			2	·0003	1·65
			13	·0003	0·50
−·0336	23·15	−·0014	32	·0011	0·25
			2	·0026	0·34
			10	·0008	0·46
			9	·0009	2·36
+·0771	23·17	+·0033	6	·0059	0·18
			4	·0031	0·20
			14	·0017	0·25
−·0150	23·74	−·0006	33	·0014	0·37
			15	·0012	0·53
			20	·0008	0·71
−·0449	23·50	−·0019	3	·0029	0·24
			58	·0020	0·14
			11	·0053	0·03
			1	·0037	0·07
−·0587	23·67	−·0025	12	·0022	0·13
			20	·0028	0·20
			33	·0013	0·55

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
1. 30—19. 45	18·25	−0·0082	−0·0211	−0·3851	−0·3838	22·42	−0·0171	64	0·0007	0·0018	0·29
19. 45—23. 55	4·17	+·0001	+·0003	+·0013				3	·0000	·0000	1·39
0. 13— 7. 11	6·97	−·0018	−·0046	−·0321				10	·0002	·0005	0·70
7. 11— 8. 14	1·05	+·0001	+·0003	+·0003	−·1364	23·64	−·0058	1	·0001	·0003	1·05
8. 14—23. 51	15·62	−·0026	−·0067	−·1046				18	·0008	·0021	0·87
1. 0—23. 55	22·92	−·0031	−·0080	−·1834	−·1834	22·92	−·0080	20	·0004	·0010	1·15
0. 12—22. 50	22·63	+·0014	+·0036	+·0815	+·0815	22·63	+·0036	30	·0005	·0013	0·75
0. 20—23. 30	23·17	−·0016	−·0041	−·0950	−·0950	23·17	−·0041	15	·0004	·0010	1·54
2. 32—10. 57	8·42	+·0008	+·0021	+·0177				8	·0002	·0005	1·05
10. 57—12. 8	1·18	−·0007	−·0018	−·0021	+·0191	21·38	+·0009	3	·0001	·0003	0·39
12. 8—23. 55	11·78	+·0001	+·0003	+·0035				1	·0016	·0041	11·78
0. 15— 6. 26	6·18	−0·0012	−0·0031	−0·0192				4	0·0001	0·0003	1·55
6. 26—17. 9	10·72	+·0007	+·0018	+·0193	−0·0137	23·48	−0·0006	12	·0002	·0005	0·89
17. 9—23. 44	6·58	−·0008	−·0021	−·0138				2	·0002	·0005	3·29
0. 20—22. 40	22·33	−·0021	−·0054	−·1206	−·1206	22·33	−·0054	31	·0002	·0005	0·72
1. 28— 8. 33	7·08	−·0022	−·0057	−·0404				3	·0010	·0026	2·36
8. 33—22. 5	13·53	+·0005	+·0013	+·0176				8	·0004	·0010	1·69
22. 5—22. 58	0·88	−·0001	−·0003	−·0003	−·0229	22·06	−·0010	5	·0003	·0008	0·18
22. 58—23. 32	0·57	+·0001	+·0003	+·0002				1	·0003	·0008	0·57
0. 0— 2. 24	2·40	−·0005	−·0013	−·0031				5	·0002	·0005	0·48
2. 24— 6. 51	4·45	+·0005	+·0013	+·0058	−·1763	23·42	−·0075	4	·0003	·0008	1·11
6. 51—23. 25	16·57	−·0042	−·0108	−·1790				44	·0003	·0008	0·38
1. 0—20. 20	19·33	+·0043	+·0111	+·2136				39	·0004	·0010	0·50
20. 20—20. 36	0·27	−·0006	−·0015	−·0004	+·2517	22·98	+·0109	3	·0006	·0015	0·09
20. 36—23. 59	3·38	+·0043	+·0111	+·0375				82	·0004	·0010	0·04
0. 4—23. 58	23·90	+·0072	+·0185	+·4422	+·4422	23·90	+·0185	54	·0004	·0010	0·44

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1852.	h m h m	h	′				h			′		h	h m h m	h		
Feb. 19	2. 38— 4. 35	1·95	+ 2·4	+0·0007	+0·0014				5	2·9	0·0008	0·39	0. 28—11. 3	10·58	−0·0049	−0·0518
	4. 35—15. 43	11·13	−18·1	− ·0053	− ·0590	−0·0261	20·95	−0·0012	55	7·9	·0023	0·20	11. 3—15. 36	4·55	+ ·0059	+ ·0268
	15. 43—23. 35	7·87	+13·9	+ ·0040	+ ·0315				13	8·4	·0024	0·61	15. 36—16. 24	0·80	− ·0006	− ·0005
													16. 24—17. 32	1·13	+ ·0006	+ ·0007
													17. 32—23. 58	6·43	− ·0038	− ·0244
„ 20	0. 51— 1. 31	0·67	+ 0·8	+ ·0002	+ ·0001				1	3·2	·0009	0·67	0. 7— 1. 9	1·03	− ·0011	− ·0011
	1. 31— 7. 59	6·47	− 5·3	− ·0015	− ·0097				14	3·7	·0011	0·46	1. 9— 5. 2	3·88	+ ·0009	+ ·0035
	7. 59— 8. 25	0·43	+ 1·2	+ ·0003	+ ·0001				2	10·0	·0029	0·22	5. 2—23. 52	18·83	− ·0021	− ·0395
	8. 25—12.. 0	3·58	− 2·8	− ·0008	− ·0029	− ·0078	22·94	− ·0003	14	3·2	·0009	0·25				
	12. 0—13. 53	1·88	+ 0·6	+ ·0002	+ ·0004				3	4·2	·0012	0·63				
	13. 53—15. 49	1·93	− 1·2	− ·0003	− ·0006				3	2·5	·0007	0·64				
	15. 49—23. 48	7·98	+ 2·0	+ ·0006	+ ·0048				8	2·2	·0006	1·00				
„ 21	0. 27— 4. 9	3·70	+ 5·4	+ ·0016	+ ·0059				12	3·3	·0010	0·31	0. 12— 3. 14	3·03	− ·0011	− ·0033
	4. 9—15. 15	11·10	− 8·5	− ·0025	− ·0278	− ·0186	23·02	− ·0008	35	5·9	·0017	0·32	3. 14— 5. 16	2·03	+ ·0014	+ ·0028
	15. 15—23. 28	8·22	+ 1·5	+ ·0004	+ ·0033				3	3·0	·0009	2·74	5. 16—23. 59	18·72	− ·0032	− ·0599
April 20	0. 5— 6. 6	6·02	+10·7	+ ·0031	+ ·0187				6	3·3	·0010	1·00	0. 2— 2. 44	2·70	− ·0016	− ·0043
	6. 6— 8. 36	2·50	−12·0	− ·0035	− ·0088				6	4·7	·0014	0·42	2. 44— 3. 10	0·43	+ ·0006	+ ·0003
	8. 36—12. 27	3·85	+ 2·2	+ ·0006	+ ·0023				4	2·3	·0007	0·96	3. 10—23. 59	20·82	− ·0036	− ·0750
	12. 27—17. 27	5·00	− 5·5	− ·0016	− ·0080	+ ·0226	23·91	+ ·0009	16	5·4	·0016	0·31				
	17. 27—17. 40	0·22	+ 1·3	+ ·0004	+ ·0001				1	14·0	·0041	0·22				
	17. 40—18. 8	0·47	− 2·9	− ·0008	− ·0004				3	5·1	·0015	0·16				
	18. 8—23. 59	5·85	+11·1	+ ·0032	+ ·0187				16	4·0	·0012	0·36				
May 19	6. 12—18. 3	11·85	−13·1	− ·0038	− ·0450				18	2·9	·0008	0·66	0. 31—11. 30	10·98	+ ·0009	+ ·0099
	18. 3—19. 12	1·15	+ 0·3	+ ·0001	+ ·0001	− ·0485	15·97	− ·0030	2	2·6	·0008	0·58	11. 30—13. 28	1·97	− ·0001	− ·0002
	19. 12—22. 10	2·97	− 4·2	− ·0012	− ·0036				5	2·7	·0008	0·59	13. 28—19. 14	5·77	+ ·0012	+ ·0069
													19. 14—23. 59	4·75	− ·0025	− ·0119
„ 20	12. 0—18. 47	6·78	− 3·4	− ·0010	− ·0068	− ·0068	6·78	− ·0010	3	3·5	·0010	2·26	0. 22— 3. 21	2·98	− ·0009	− ·0027
													3. 21— 8. 29	5·13	+ ·0007	+ ·0036
													8. 29—23. 47	15·30	− ·0005	− ·0077
June 11	1. 28— 6. 38	5·17	+ 2·9	+ ·0008	+ ·0041				3	2·7	·0008	1·72	0. 30— 9. 12	8·70	+ ·0017	+ ·0148
	6. 38—14. 24	7·77	−11·9	− ·0035	− ·0272	− ·0030	22·52	− ·0001	17	6·9	·0020	0·46	9. 12—23. 59	14·78	− ·0031	− ·0458
	14. 24—23. 59	9·58	+ 7·3	+ ·0021	+ ·0201				11	6·4	·0019	0·87				
„ 16	0. 40— 3. 18	2·63	− 1·3	− ·0004	− ·0011				3	3·3	·0010	0·88	0. 30— 8. 34	8·07	+ ·0019	+ ·0153
	3. 18— 6. 15	2·95	+ 3·6	+ ·0010	+ ·0030				7	2·5	·0007	0·42	8. 34— 8. 51	0·28	− ·0001	·0000
	6. 15—17. 45	11·50	− 6·1	− ·0018	− ·0207	− ·0126	23·31	− ·0005	24	3·5	·0010	0·48	8. 51—16. 18	7·45	+ ·0008	+ ·0060
	17. 45—23. 59	6·23	+ 3·4	+ ·0010	+ ·0062				7	2·3	·0007	0·89	16. 18—21. 46	5·47	− ·0009	− ·0049
													21. 46—23. 59	2·22	+ ·0006	+ ·0013
July 10	1. 26— 7. 17	5·85	+ 3·7	+ ·0011	+ ·0064				13	3·5	·0010	0·45	1. 55—11. 52	9·95	+ ·0019	+ ·0189
	7. 18—22. 30	15·20	− 9·7	− ·0028	− ·0426	− ·0362	21·05	− ·0017	16	4·7	·0014	0·95	11. 52—23. 10	11·30	− ·0013	− ·0147
Nov. 11	0. 0— 8. 33	8·55	+ 3·4	+ ·0010	+ ·0086				11	5·5	·0016	0·78	0. 46— 6. 16	5·50	+ ·0012	+ ·0066
	8. 33—13. 59	5·43	−10·5	− ·0031	− ·0168	+ ·0057	23·88	+ ·0002	11	5·8	·0017	0·49	6. 16—23. 59	17·72	− ·0017	− ·0301
	13. 59—23. 53	9·90	+ 4·9	+ ·0014	+ ·0139				15	2·8	·0008	0·66				
„ 13	0. 18— 4. 32	4·23	+ 2·1	+ ·0006	+ ·0025				7	3·1	·0009	0·60	0. 44—13. 3	12·32	− ·0019	− ·0234
	4. 32—15. 0	10·47	− 4·6	− ·0013	− ·0136	+ ·0114	23·68	+ ·0005	21	4·5	·0013	0·50	13. 3—13. 14	0·18	+ ·0001	·0000
	15. 0—23. 59	8·98	+ 8·7	+ ·0025	+ ·0225				15	3·9	·0011	0·60	13. 14—23. 59	10·75	− ·0011	− ·0118
1853.																
Jan. 10	1. 15— 2. 13	0·97	+ 0·5	+0·0001	+0·0001				1	1·9	0·0006	0·97	1. 22— 8. 6	6·73	−0·0008	−0·0052
	2. 13—10. 21	8·13	− 6·1	− ·0018	− ·0146	−0·0063	22·73	−0·0003	11	4·4	·0013	0·74	8. 6— 8. 58	0·87	+ ·0005	+ ·0004
	10. 21—23. 59	13·63	+ 1·9	+ ·0006	+ ·0082				7	2·4	·0007	1·95	8. 58—23. 59	15·02	− ·0010	− ·0150
March 7	0. 10— 4. 5	3·92	− 3·0	− ·0009	− ·0035				2	1·1	·0003	1·96	0. 5— 3. 13	3·13	+ ·0003	+ ·0006
	4. 5— 6. 25	2·33	+ 2·1	+ ·0006	+ ·0014				11	0·8	·0002	0·21	3. 13— 5. 32	2·32	− ·0007	− ·0016
	6. 25—12. 20	5·92	− 7·1	− ·0021	− ·0124				23	2·9	·0008	0·25	5. 32— 7. 19	1·78	+ ·0015	+ ·0027
	12. 20—14. 5	1·75	+ 2·5	+ ·0007	+ ·0012	− ·0171	23·82	− ·0007	4	3·1	·0009	0·44	7. 19—16. 10	8·85	− ·0013	− ·0115
	14. 5—19. 27	5·37	− 3·8	− ·0011	− ·0059				14	2·8	·0008	0·39	16. 10—17. 2	0·87	+ ·0003	+ ·0002
	19. 27—22. 27	3·00	+ 2·3	+ ·0007	+ ·0021				6	1·3	·0004	0·50	17. 2—23. 59	6·95	− ·0019	− ·0133
	22. 27—23. 29	1·03	− 0·8	− ·0002	− ·0002				3	0·5	·0001	0·34				
	23. 29—23. 59	0·50	+ 1·5	+ ·0004	+ ·0002				3	1·7	·0005	0·17				
„ 8	1. 0— 2. 9	1·15	− 0·5	− ·0001	− ·0001				2	0·9	·0003	0·58	0. 5— 2. 55	2·83	− ·0011	− ·0031
	2. 9— 6. 25	4·27	+ 3·7	+ ·0011	+ ·0047				16	1·8	·0005	0·27	2. 55—13. 27	10·53	+ ·0006	+ ·0064
	6. 25—11. 43	5·30	− 9·5	− ·0028	− ·0148	− ·0073	22·98	− ·0003	19	3·7	·0011	0·28	13. 27—18. 49	5·37	− ·0016	− ·0086
	11. 43—15. 10	3·45	+ 4·4	+ ·0013	+ ·0045				8	8·2	·0024	0·43	18. 49—20. 23	1·57	+ ·0014	+ ·0022
	15. 10—19. 24	4·23	− 2·8	− ·0008	− ·0034				12	1·7	·0005	0·35	20. 23—23. 59	3·60	− ·0011	− ·0040
	19. 24—23. 59	4·58	+ 1·3	+ ·0004	+ ·0018				15	1·8	·0005	0·31				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			8	0·0028	1·32
			7	·0052	0·65
−0·0492	23·49	−0·0021	3	·0017	0·27
			8	·0014	0·14
			45	·0014	0·14
			4	·0008	0·26
− ·0371	23·74	− ·0016	16	·0013	0·24
			40	·0010	0·47
			8	·0009	0·38
− ·0604	23·78	− ·0025	12	·0013	0·17
			50	·0011	0·37
			8	·0009	0·34
− ·0790	23·95	− ·0033	4	·0016	0·11
			40	·0015	0·52
			16	·0008	0·69
			4	·0005	0·49
+ ·0047	23·47	+ ·0002	8	·0012	0·72
			8	·0010	0·59
			6	·0007	0·50
− ·0068	23·41	− ·0003	14	·0016	0·37
			17	·0011	0·90
			15	·0011	0·58
− ·0310	23·48	− ·0013	22	·0019	0·67
			17	·0014	0·47
			2	·0006	0·14
+ ·0177	23·49	+ ·0008	15	·0010	0·50
			4	·0016	1·37
			1	·0006	2·22
			16	·0019	0·62
+ ·0042	21·25	+ ·0002	9	·0013	1·26
			3	·0010	1·83
− ·0235	23·22	− ·0010	35	·0012	0·51
			12	·0010	1·03
− ·0352	23·25	− ·0015	2	·0013	0·09
			11	·0014	0·98
			5	0·0013	1·35
−0·0200	22·62	−0·0009	3	·0010	0·29
			8	·0006	1·88
			3	·0004	1·04
			6	·0006	0·39
			8	·0011	0·22
− ·0224	23·90	− ·0009	22	·0008	0·40
			2	·0008	0·44
			22	·0004	0·32
			4	·0011	0·71
			23	·0008	0·46
− ·0072	23·90	− ·0003	14	·0005	0·38
			7	·0011	0·22
			9	·0005	0·40

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
1. 0—23. 58	22·97	−0·0044	−0·0113	−0·2596	−0·2596	22·97	−0·0113	100	0·0007	0·0018	0·23
0. 46—23. 52	23·10	− ·0027	− ·0069	− ·1594	− ·1594	23·10	− ·0069	17	·0004	·0010	1·36
0. 45—23. 17	22·53	− ·0030	− ·0077	− ·1735	− ·1735	22·53	− ·0077	23	·0004	·0010	0·98
1. 22—23. 52	22·50	− ·0026	− ·0067	− ·1508	− ·1508	22·50	− ·0067	41	·0004	·0010	0·55
2. 0—23. 15	21·25	+ ·0011	+ ·0028	+ ·0595	+ ·0595	21·25	+ ·0028	12	·0004	·0010	1·75
1. 30—15. 15	13·75	+ ·0017	+ ·0044	+ ·0605	+ ·0605	13·75	+ ·0044	14	·0002	·0005	0·98
1. 30—23. 51	22·33	− ·0076	− ·0195	− ·4354	− ·4354	22·33	− ·0195	32	·0004	·0010	0·70
				No Register.							
0. 55— 3. 16	2·35	− ·0004	− ·0010	− ·0024				1	·0000	·0000	2·35
3. 16—13. 14	9·97	+ ·0007	+ ·0018	+ ·0179	− ·0302	22·25	− ·0014	10	·0003	·0008	1·00
13. 14—23. 10	9·93	− ·0018	− ·0046	− ·0457				4	·0004	·0010	2·48
1. 0—23. 57	22·95	+ ·0055	+ ·0141	+ ·3236	+ ·3236	22·95	+ ·0141	20	·0004	·0010	1·15
2. 1—23. 17	21·27	− ·0030	− ·0077	− ·1638	− ·1638	21·27	− ·0077	12	·0003	·0008	1·77
				No Photographic Register.							
0. 12—23. 59	23·78	+0·0055	+0·0141	+0·3353	+0·3353	23·78	+0·0141	11	0·0007	0·0018	2·16
1. 27—23. 54	22·45	+ ·0092	+ ·0236	+ ·5298	+ ·5298	22·45	+ ·0236	11	·0005	·0013	2·04

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1853.	h m h m	h	′				h			′		h	h m h m	h		
March 11													0. 5— 5. 21	5·27	−0·0009	−0·0047
													5. 21— 6. 28	1·12	+ ·0004	+ ·0004
													6. 28—11. 46	5·30	− ·0007	− ·0037
													11. 46—13. 18	1·53	+ ·0006	+ ·0009
													13. 18—23. 59	10·68	− ·0017	− ·0182
May 2	1. 46— 7. 31	5·75	+ 2·2	+ 0·0006	+ 0·0035				7	0·9	0·0003	0·82	0. 30—23. 59	23·48	− ·0028	− ·0657
	7. 31—17. 30	9·98	− 7·8	− ·0023	− ·0230	−0·0101	22·00	−0·0005	31	2·0	·0006	0·32				
	17. 30—23. 46	6·27	+ 5·0	+ ·0015	+ ·0094				21	2·7	·0008	0·30				
„ 3	0. 6— 3. 43	3·62	+ 4·4	+ ·0013	+ ·0047				10	1·6	·0005	0·36	0. 4— 6. 16	6·20	− ·0022	− ·0136
	3. 43— 9. 20	5·61	− 4·6	− ·0013	− ·0073				18	2·5	·0007	0·31	6. 16— 6. 26	0·17	+ ·0002	·0000
	9. 20—10. 6	0·77	+ 1·3	+ ·0004	+ ·0003	− ·0074	23·72	− ·0003	2	6·0	·0017	0·39	6. 26—23. 45	17·32	− ·0024	− ·0416
	10. 6—14. 6	4·00	− 3·8	− ·0011	− ·0044				11	1·6	·0005	0·36				
	14. 6—17. 37	3·52	+ 1·7	+ ·0005	+ ·0018				8	2·2	·0006	0·44				
	17. 37—23. 49	6·20	− 1·5	− ·0004	− ·0025				14	1·8	·0005	0·44				
„ 24	0. 13— 7. 4	6·85	+ 3·7	+ ·0011	+ ·0075				12	1·5	·0004	0·57	0. 8—14. 35	14·45	+ ·0040	+ ·0578
	7. 4—10. 33	3·48	− 5·7	− ·0017	− ·0059				13	1·6	·0005	0·27	14. 35—14. 45	0·17	− ·0013	− ·0002
	10. 33—14. 8	3·58	+ 1·4	+ ·0004	+ ·0014				10	3·9	·0011	0·36	14. 45—15. 46	1·02	+ ·0010	+ ·0010
	14. 8—15. 14	1·10	− 9·5	− ·0028	− ·0031	+ ·0092	23·33	+ ·0004	3	7·6	·0022	0·37	15. 46—22. 23	6·62	− ·0044	− ·0291
	15. 14—18. 54	3·67	+ 6·5	+ ·0019	+ ·0070				15	5·2	·0015	0·24	22. 23—23. 45	1·37	+ ·0004	+ ·0005
	18. 54—19. 41	0·78	− 1·7	− ·0005	− ·0004				4	2·6	·0008	0·20				
	19. 41—23. 33	3·87	+ 2·3	+ ·0007	+ ·0027				20	1·7	·0005	0·19				
June 22	0. 8— 7. 37	7·48	+ 2·1	+ ·0006	+ ·0045				9	1·7	·0005	0·83	0. 15— 2. 41	2·43	− ·0003	− ·0007
	7. 37—21. 16	13·65	− 5·2	− ·0015	− ·0205	− ·0157	23·78	− ·0007	40	2·7	·0008	0·34	2. 41—11. 30	8·82	+ ·0013	+ ·0115
	21. 16—23. 55	2·65	+ 0·3	+ ·0001	+ ·0003				1	0·8	·0002	2·65	11. 30—23. 55	12·42	− ·0011	− ·0137
July 12	0. 12—10. 2	9·83	+ 4·5	+ ·0013	+ ·0128				34	2·6	·0008	0·29	0. 0— 1. 50	1·83	− ·0006	− ·0011
	10. 2—11. 21	1·32	− 7·2	− ·0021	− ·0027				7	7·2	·0021	0·19	1. 50—10. 46	8·93	+ ·0031	+ ·0278
	11. 21—11. 40	0·32	+ 10·0	+ ·0029	+ ·0009				2	21·6	·0063	0·16	10. 46—23. 59	13·22	− ·0027	− ·0357
	11. 40—16. 10	4·50	− 6·1	− ·0018	− ·0081	− ·0019	23·79	− ·0001	32	3·1	·0009	0·14				
	16. 10—16. 43	0·55	+ 1·0	+ ·0003	+ ·0002				4	3·2	·0009	0·14				
	16. 43—19. 45	3·03	− 4·2	− ·0012	− ·0036				22	2·3	·0007	0·14				
	19. 45—20. 10	0·42	+ 1·0	+ ·0003	+ ·0001				9	1·4	·0004	0·05				
	20. 10—23. 59	3·82	− 1·5	− ·0004	− ·0015				13	1·4	·0004	0·29				
Aug. 21	Declination and Horizontal Force Photographic Traces too faint for use.															
Sept. 1	0. 27— 8. 46	8·32	+ 1·2	+ ·0003	+ ·0025				2	1·3	·0004	4·16	1. 5—14. 53	13·80	+ ·0028	+ ·0386
	8. 46—10. 22	1·60	− 0·8	− ·0002	− ·0003				3	1·0	·0003	0·53	14. 53—16. 33	1·67	− ·0018	− ·0030
	10. 22—13. 37	3·25	+ 2·0	+ ·0006	+ ·0020				7	1·3	·0004	0·46	16. 33—17. 42	1·15	+ ·0015	+ ·0017
	13. 37—14. 32	0·92	− 0·8	− ·0002	− ·0002	+ ·0220	23·54	+ ·0009	2	1·3	·0004	0·46	17. 42—23. 50	6·13	− ·0066	− ·0405
	14. 32—15. 50	1·30	+ 8·0	+ ·0023	+ ·0030				4	7·1	·0021	0·33				
	15. 50—17. 34	1·73	− 3·3	− ·0010	− ·0017				11	1·4	·0004	0·16				
	17. 34—23. 59	6·42	+ 8·8	+ ·0026	+ ·0167				13	2·1	·0006	0·49				
„ 2	0. 18— 5. 22	5·07	+ 5·8	+ ·0017	+ ·0086				12	1·7	·0005	0·42	0. 0— 3. 18	3·30	− ·0014	− ·0046
	5. 22— 9. 21	3·98	− 1·1	− ·0003	− ·0012				9	3·4	·0010	0·44	3. 18— 5. 54	2·60	+ ·0020	+ ·0052
	9. 21— 9. 55	0·57	+ 0·4	+ ·0001	+ ·0001	+ ·0037	23·62	+ ·0002	3	1·9	·0006	0·19	5. 54—16. 4	10·17	− ·0024	− ·0245
	9. 55—14. 52	4·95	− 8·3	− ·0024	− ·0119				21	3·6	·0010	0·23	16. 4—17. 20	1·27	+ ·0007	+ ·0009
	14. 52—23. 55	9·05	+ 3·1	+ ·0009	+ ·0081				25	3·8	·0011	0·36	17. 20—23. 53	6·55	− ·0059	− ·0386
Oct. 1													0. 0—23. 59	23·98	− ·0013	− ·0312
„ 2													0. 0—23. 59	23·98	− ·0014	− ·0336
„ 25	0. 28— 4. 9	3·68	+ 1·5	+ ·0004	+ ·0015				3	1·8	·0005	1·23	0. 0—10. 10	10·17	− ·0011	− ·0112
	4. 9—11. 17	7·13	− 5·4	− ·0016	− ·0114	− ·0119	23·51	− ·0005	13	4·1	·0012	0·55	10. 10—16. 57	6·78	+ ·0005	+ ·0034
	11. 17—13. 8	1·85	+ 0·4	+ ·0001	+ ·0002				3	13·1	·0038	0·62	16. 57—23. 59	7·03	− ·0002	− ·0014
	13. 8—23. 59	10·85	− 0·8	− ·0002	− ·0022				3	0·8	·0002	3·62				
Nov. 9	0. 30— 4. 44	4·23	+ 3·9	+ ·0011	+ ·0047				6	1·8	·0005	0·71	0. 15—23. 59	23·73	− ·0020	− ·0474
	4. 44— 7. 4	2·33	− 1·1	− ·0003	− ·0007				4	4·3	·0013	0·58				
	7. 4— 9. 16	2·20	+ 1·4	+ ·0004	+ ·0009	+ ·0037	23·48	+ ·0002	2	2·5	·0007	1·10				
	9. 16—15. 4	5·80	−13·3	− ·0039	− ·0226				15	3·1	·0009	0·39				
	15. 4—23. 59	8·92	+ 8·4	+ ·0024	+ ·0214				22	2·7	·0008	0·41				
Dec. 6	0. 31— 5. 58	5·45	+11·3	+ ·0033	+ ·0180				21	2·4	·0007	0·26	0. 0—23. 59	23·98	− ·0045	− ·1079
	5. 58—11. 4	5·10	− 6·5	− ·0019	− ·0097				21	3·4	·0010	0·24				
	11. 4—16. 40	5·60	+ 3·7	+ ·0011	+ ·0062	+ ·0134	23·47	+ ·0006	12	3·4	·0010	0·47				
	16. 40—23. 4	6·40	− 0·8	− ·0002	− ·0013				4	1·0	·0003	1·60				
	23. 4—23. 59	0·92	+ 0·6	+ ·0002	+ ·0002				2	1·4	·0004	0·46				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			5	0·0004	1·05
			5	·0006	0·22
−0·0253	23·90	−0·0011	16	·0008	0·33
			6	·0014	0·26
			22	·0007	0·49
− ·0657	23·48	− ·0028	80	·0007	0·29
			22	·0012	0·28
− ·0552	23·69	− ·0023	1	·0010	0·17
			38	·0007	0·46
			57	·0011	0·25
			1	·0004	0·17
+ ·0300	23·63	+ ·0013	4	·0034	0·25
			30	·0014	0·22
			5	·0004	0·27
			2	·0001	1·22
− ·0029	23·67	− ·0001	23	·0012	0·38
			26	·0006	0·48
			4	·0005	0·46
− ·0090	23·98	− ·0004	55	·0012	0·16
			70	·0008	0·19
			18	·0007	0·77
− ·0032	22·75	− ·0001	7	·0015	0·24
			6	·0003	0·19
			15	·0012	0·41
			7	·0013	0·47
			17	·0023	0·15
− ·0616	23·89	− ·0026	36	·0008	0·28
			4	·0014	0·32
			26	·0003	0·25
− ·0312	23·98	− ·0013	12	·0003	2·00
− ·0336	23·98	− ·0014	9	·0004	2·66
			16	·0007	0·64
− ·0092	23·98	− ·0004	9	·0003	0·75
			2	·0006	3·52
− ·0474	23·73	− ·0020	49	·0008	0·49
− ·1079	23·98	− ·0045	41	·0011	0·58

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
0. 46—23. 59	23·22	+0·0059	+0·0152	+0·3529	+0·3529	23·22	+0·0152	11	0·0006	0·0015	2·11
1. 5—23. 59	22·90	+ ·0061	+ ·0157	+ ·3595	+ ·3595	22·90	+ ·0157	15	·0004	·0010	1·53
1. 0—23. 59	22·98	+ ·0058	+ ·0149	+ ·3424	+ ·3424	22·98	+ ·0149	21	·0003	·0008	1·09
								24	·0006	·0015	0·66
0. 15—16. 11	15·93	+ ·0047	+ ·0121	+ ·1928							
16. 11—16. 32	0·35	− ·0002	− ·0005	− ·0002	+ ·2269	23·73	+ ·0096	1	·0013	·0033	0·35
16. 32—23. 59	7·45	+ ·0018	+ ·0046	+ ·0343				12	·0006	·0015	0·62
0. 45—23. 59	23·23	− ·0025	− ·0064	− ·1487	− ·1487	23·23	− ·0064	17	·0004	·0010	1·37
0. 35— 5. 36	5·02	− ·0012	− ·0031	− ·0156				4	·0006	·0015	1·26
5. 36—10. 40	5·07	+ ·0018	+ ·0046	+ ·0233				9	·0006	·0015	0·56
10. 40—12. 39	1·98	− ·0036	− ·0093	− ·0184	+ ·0097	23·40	+ ·0004	7	·0009	·0023	0·28
12. 39—23. 59	11·33	+ ·0007	+ ·0018	+ ·0204				14	·0004	·0010	0·81
0. 15—23. 59	23·73	− ·0010	− ·0026	− ·0617	− ·0617	23·73	− ·0026	8	·0006	·0015	2·97
0. 30—10. 22	9·87	+ ·0002	+ ·0005	+ ·0049				3	·0002	·0005	3·29
10. 22—23. 59	13·62	− ·0017	− ·0044	− ·0599	− ·0550	23·49	− ·0023	10	·0007	·0018	1·36
0. 15—14. 48	14·55	+ ·0014	+ ·0036	+ ·0524				27	·0004	·0010	0·54
14. 48—23. 59	9·18	− ·0008	− ·0021	− ·0193	+ ·0331	23·73	+ ·0014	9	·0004	·0010	1·02
				Values insufficient for Reduction.							
				Values insufficient for Reduction.							
0. 0—23. 59	23·98	+ ·0050	+ ·0129	+ ·3093	+ ·3093	23·98	+ ·0129	10	·0004	·0010	2·40
0. 30— 6. 45	6·25	+ ·0006	+ ·0015	+ ·0094				4	·0002	·0005	1·56
6. 45—23. 59	17·23	− ·0015	− ·0039	− ·0672	− ·0578	23·48	− ·0025	15	·0002	·0005	1·15
0. 40— 8. 59	8·32	+ ·0019	+ ·0049	+ ·0408				18	·0005	·0013	0·46
8. 59—23. 59	15·00	− ·0006	− ·0015	− ·0225	+ ·0183	23·32	+ ·0008	8	·0005	·0013	1·88

Abstract of Magnetic Storms

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
	h m h m	h	′				h			′		h	h m h m	h		
1853.																
Dec. 21	0. 13 – 4. 48	4·58	+ 2·5	+0·0007	+0·0032				8	1·0	0·0003	0·57	0. 10— 5. 19	5·15	−0·0007	−0·0036
	4. 48— 5. 37	0·82	− 1·7	− ·0005	− ·0004				2	4·4	·0013	0·41	5. 19— 7. 10	1·85	+ ·0007	+ ·0013
	5. 37— 7. 43	2·10	+ 2·7	+ ·0008	+ ·0017	+0·0044	23·37	+0·0002	4	2·1	·0006	0·52	7. 10—23. 10	16·00	− ·0003	− ·0048
	7. 43 –11. 20	3·62	− 6·0	− ·0017	− ·0062				8	6·0	·0017	0·45				
	11. 20—23. 35	12·25	+ 1·6	+ ·0005	+ ·0061				13	1·5	·0004	0·94				
1854.																
Jan. 8	0. 10— 5. 16	5·10	+ 3·4	+0·0010	+0·0051				8	1·3	0·0004	0·64	0. 35— 7. 39	7·07	−0·0009	−0·0064
	5. 16—11. 22	6·10	− 6·3	− ·0018	− ·0110	+0·0029	23·82	+0·0001	14	2·9	·0008	0·44	7. 39—23. 59	16·33	+ ·0019	+ ·0310
	11. 22—23. 59	12·62	+ 2·3	+ ·0007	+ ·0088				11	1·9	·0006	1·15				
„ 20	0. 8— 3. 22	3·23	+ 1·9	+ ·0006	+ ·0019				10	1·3	·0004	0·32	0. 30— 6. 10	5·67	− ·0006	− ·0034
	3. 22— 5. 11	1·82	− 1·9	− ·0006	− ·0011				3	2·5	·0007	0·61	6. 10— 6. 57	0·78	+ ·0008	+ ·0006
	5. 11— 5. 40	0·48	+ 1·1	+ ·0003	+ ·0001				2	1·7	·0005	0·24	6. 57—23. 59	17·03	− ·0004	− ·0068
	5. 40—10. 9	4·48	−10·0	− ·0029	− ·0130				12	3·6	·0010	0·37				
	10. 9—14. 40	4·52	+ 3·5	+ ·0010	+ ·0045	− ·0043	23·85	− ·0002	12	1·7	·0005	0·38				
	14. 40—16. 4	1·40	− 0·7	− ·0002	− ·0003				3	1·1	·0003	0·47				
	16. 4—22. 4	6·00	+ 2·1	+ ·0006	+ ·0036				6	0·8	·0002	1·00				
	22. 4—23. 59	1·92	0·0	·0000	·0000				1	0·8	·0002	1·92				
Feb. 16	0. 10— 4. 13	4·05	− 1·0	− ·0003	− ·0012				7	1·5	·0004	0·58	0. 0— 6. 20	6·33	− ·0017	− ·0108
	4. 13— 5. 44	1·52	+ 0·7	+ ·0002	+ ·0003				3	1·8	·0005	0·51	6. 20— 7. 11	0·85	+ ·0013	+ ·0011
	5. 44 – 8. 22	2·63	− 6·4	− ·0019	− ·0050	− ·0209	23·82	− ·0009	13	3·6	·0010	0·20	7. 11—14. 15	7·07	− ·0017	− ·0120
	8. 22— 8. 46	0·40	+ 2·0	+ ·0006	+ ·0002				3	7·7	·0022	0·13	14. 15—15. 46	1·52	+ ·0008	+ ·0012
	8. 46—23. 59	15·22	− 3·5	− ·0010	− ·0152				30	2·4	·0007	0·51	15. 46—23. 59	8·22	− ·0016	− ·0132
„ 24	0. 5— 3. 3	2·97	− 1·0	− ·0003	− ·0009				1	0·8	·0002	2·97	0. 40— 6. 4	5·40	+ ·0023	+ ·0124
	3. 3— 6. 19	3·27	+ 4·7	+ ·0014	+ ·0046				7	2·0	·0006	0·47	6. 4 –19. 28	13·40	− ·0007	− ·0094
	6. 19— 7. 9	0·83	− 4·1	− ·0012	− ·0010				3	5·6	·0016	0·28	19. 28—20. 28	1·00	+ ·0001	+ ·0001
	7. 9— 9. 0	1·85	+ 7·3	+ ·0021	+ ·0039	− ·0145	23·91	− ·0006	6	6·2	·0018	0·31	20. 28—23. 59	3·52	− ·0003	− ·0011
	9. 0—21. 58	12·97	− 5·8	− ·0017	− ·0221				31	2·7	·0008	0·42				
	21. 58—23. 59	2·02	+ 1·7	+ ·0005	+ ·0010				5	1·0	·0003	0·40				
„ 25	0. 8— 5. 54	5·77	+ 2·2	+ ·0006	+ ·0035				13	1·9	·0006	0·44	0. 8— 1. 11	1·05	− ·0012	− ·0013
	5. 54— 9. 50	3·93	− 3·9	− ·0011	− ·0043	+ ·0049	23·85	+ ·0002	16	3·8	·0011	0·25	1. 11— 2. 50	1·65	+ ·0008	+ ·0013
	9. 50—23. 59	14·15	+ 1·3	+ ·0004	+ ·0057				27	1·7	·0005	0·52	2. 50— 6. 16	3·43	− ·0009	− ·0031
													6. 16—16. 8	9·87	+ ·0014	+ ·0138
													16. 8—20. 47	4·65	− ·0003	− ·0014
													20. 47—23. 59	3·20	+ ·0008	+ ·0026
March 6	0. 7— 8. 54	8·78	− 5·9	− ·0017	− ·0149				11	3·0	·0009	0·80	0. 0—11. 1	11·02	− ·0007	− ·0077
	8. 54—12. 27	3·55	+ 2·5	+ ·0007	+ ·0025				9	1·9	·0006	0·39	11. 1—12. 54	1·88	+ ·0005	+ ·0009
	12. 27—14. 39	2·20	− 1·1	− ·0003	− ·0007	− ·0084	23·86	− ·0004	5	0·9	·0003	0·44	12. 54—13. 31	0·62	− ·0001	− ·0001
	14. 39—23. 59	9·33	+ 1·6	+ ·0005	+ ·0047				8	0·8	·0002	1·17	13. 31—22. 51	9·33	+ ·0005	+ ·0047
													22. 51—23. 59	1·13	− ·0010	− ·0011
„ 15	0. 18— 7. 48	7·50	+ 2·3	+ ·0007	+ ·0052				7	0·8	·0002	1·07	0. 0— 8. 5	8·08	+ ·0009	+ ·0073
	7. 48— 9. 5	1·28	− 2·9	− ·0008	− ·0010				4	3·1	·0009	0·32	8. 5—23. 59	15·90	− ·0021	− ·0334
	9. 5— 9. 29	0·40	+ 1·8	+ ·0005	+ ·0002				2	4·1	·0012	0·20				
	9. 29—15. 31	6·03	− 9·7	− ·0028	− ·0169				23	4·3	·0013	0·26				
	15. 31—15. 57	0·43	+ 0·7	+ ·0002	+ ·0001	− ·0099	23·67	− ·0004	3	1·6	·0005	0·14				
	15. 57—16. 15	0·30	− 0·6	− ·0002	− ·0001				2	1·5	·0004	0·15				
	16. 15—17. 23	1·13	+ 0·5	+ ·0001	+ ·0001				6	1·2	·0003	0·19				
	17. 23—18. 33	1·17	− 0·8	− ·0002	− ·0002				3	1·5	·0004	0·39				
	18. 33—23. 59	5·43	+ 1·7	+ ·0005	+ ·0027				9	1·6	·0005	0·60				
„ 16	0. 19— 6. 22	6·05	+ 2·4	+ ·0007	+ ·0042				15	1·6	·0005	0·40	0. 0—23. 59	23·98	− ·0017	− ·0408
	6. 22 –10. 0	3·63	− 6·3	− ·0018	− ·0065				12	6·7	·0019	0·30				
	10. 0 –10. 28	0·47	+ 5·9	+ ·0017	+ ·0008				4	5·8	·0017	0·12				
	10. 28 –13. 14	2·77	− 7·5	− ·0022	− ·0061	− ·0034	23·49	− ·0001	12	2·5	·0007	0·23				
	13. 14—14. 31	1·28	+ 6·1	+ ·0018	+ ·0023				4	3·6	·0010	0·32				
	14. 31—16. 38	2·12	− 6·1	− ·0018	− ·0038				4	2·2	·0006	0·53				
	16. 38—23. 48	7·17	+ 2·6	+ ·0008	+ ·0057				7	1·3	·0004	1·02				
„ 28	0. 12— 4. 3	3·85	+ 6·2	+ ·0018	+ ·0069				12	1·8	·0005	0·32	0. 0—23. 59	23 98	− ·0053	− ·1271
	4. 3—15. 0	10·95	− 5·2	− ·0015	− ·0164	− ·0114	23·78	− ·0005	43	3·9	·0011	0·25				
	15. 0 –17. 0	2·00	+ 2·9	+ ·0008	+ ·0016				4	1·8	·0005	0·50				
	17. 0 23. 59	6·98	− 1·8	− ·0005	− ·0035				3	1·6	·0005	2·33				
April 10	0. 7— 5. 21	5·23	− 0·6	− ·0002	− ·0010				2	0·7	·0002	2·62	0. 5—13. 19	13·23	+ ·0021	+ ·0278
	5. 21—13. 26	8·08	+ 3·8	+ ·0011	+ ·0089				6	5·0	·0015	1·35	13. 19—15. 25	2·10	− ·0015	− ·0032
	13. 26—18. 2	4·60	−16·6	− ·0048	− ·0221				19	3·9	·0011	0·24	15. 25—16. 3	0·63	+ ·0006	+ ·0004
	18. 2—18. 40	0·63	+ 6·9	+ ·0020	+ ·0013	− ·0076	23·86	− ·0003	3	7·8	·0023	0·21	16. 3—23. 59	7·93	− ·0047	− ·0373
	18. 40—20. 55	2·25	− 5·5	− ·0016	− ·0036				7	3·4	·0010	0·32				
	20. 55—23. 59	3·07	+10·1	+ ·0029	+ ·0089				12	2·3	·0007	0·26				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			10	0·0009	0·52
−0·0071	23·00	−0·0003	4	·0004	0·46
			14	·0008	1·14
			11	0·0010	0·64
+0·0246	23·40	+0·0011	13	·0009	1·26
			10	·0007	0·57
−·0096	23·48	−·0004	4	·0006	0·20
			21	·0005	0·81
			15	·0006	0·42
			5	·0010	0·17
−·0337	23·99	−·0014	22	·0008	0·32
			3	·0033	0·51
			22	·0006	0·37
			12	·0007	0·45
			43	·0008	0·31
+·0020	23·32	+·0001	5	·0003	0·20
			7	·0005	0·50
			3	·0008	0·35
			4	·0006	0·41
			12	·0007	0·29
+·0119	23·85	−·0005	27	·0010	0·37
			10	·0004	0·46
			7	·0005	0·46
			22	·0006	0·50
			5	·0008	0·38
−·0033	23·98	−·0001	2	·0002	0·31
			6	·0004	1·56
			2	·0004	0·57
−·0261	23·98	−·0011	11	·0004	0·73
			54	·0007	0·29
−·0408	23·98	−·0017	69	·0007	0·35
−·1271	23·98	−·0053	77	·0007	0·31
			43	·0004	0·31
−·0123	23·89	−·0005	7	·0016	0·30
			3	·0009	0·21
			26	·0015	0·30

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
0. 30—23. 45	23·25	−0·0030	−0·0077	−0·1790	−0·1790	23·25	−0·0077	8	0·0003	0·0008	2·91
0. 18—23. 59	23·68	−0·0018	−0·0046	−0·1089	−0·1089	23·68	−0·0046	13	0·0003	0·0008	1·82
0. 0— 6. 57	6·95	−·0006	−·0015	−·0104	−·0104	6·95	−·0015	4	·0002	·0005	1·74
Time-piece stopped for 3 hours.											
9. 53—23. 59	14·10	−·0015	−·0039	−·0550	−·0550	14·10	−·0039	4	·0006	·0015	3·53
0. 12—23. 59	23·78	−·0019	−·0049	−·1165	−·1165	23·78	−·0049	26	·0003	·0008	0·91
0. 15— 6. 47	6·53	−·0013	−·0033	−·0215				5	·0005	·0013	1·31
6. 47— 9. 36	2·82	+·0003	+·0008	+·0023	−·1414	23·73	−·0060	5	·0001	·0003	0·56
9. 36—23. 59	14·38	−·0033	−·0085	−·1222				11	·0003	·0008	1·31
0. 17— 5. 22	5·08	−·0019	−·0049	−·0249				5	·0002	·0005	1·02
5. 22—23. 59	18·62	+·0022	+·0057	+·1061	+·0812	23·70	+·0034	17	·0004	·0010	1·10
0. 8—23. 59	23·85	−·0017	−·0044	−·1049	−·1049	23·85	−·0044	16	·0005	·0013	1·49
0. 40— 7. 51	7·18	−·0007	−·0018	−·0129				4	·0004	·0012	1·79
7. 51—13. 16	5·42	+·0004	+·0010	+·0054				8	·0003	·0008	0·68
13. 16—18. 46	5·50	−·0010	−·0026	−·0143	−·0030	23·32	−·0001	10	·0004	·0010	0·55
18. 46—23. 59	5·22	+·0014	+·0036	+·0188				6	·0002	·0005	0·87
0. 15—23. 59	23·73	+·0008	+·0021	+·0498	+·0498	23·73	+·0021	24	·0003	·0008	2·99
1. 19—23. 59	22·67	+·0025	+·0064	+·1451	+·1451	22·67	+·0064	49	·0002	·0005	0·46
1. 23—11. 36	10·22	−·0008	−·0021	−·0215				6	·0002	·0005	1·70
11. 36—12. 10	0·57	+·0001	+·0003	+·0002	−·0851	22·61	−·0038	3	·0001	·0003	0·19
12. 10—23. 59	11·82	−·0021	−·0054	−·0638				43	·0003	·0008	0·27

Month and Day.	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1854.	h m h m	h	′				h			′		h	h m h m	h		
April 23	0. 24—10. 47	10·38	+ 2·6	+0·0008	+0·0083				12	1·7	0·0005	0·87	0. 0— 1. 34	1·57	+0·0001	+0·0002
	10. 47—16. 14	5·45	− 4·2	− ·0012	− ·0065	+0·0103	23·56	+0·0004	14	2·0	·0006	0·39	1. 34— 5. 48	4·23	− ·0009	− ·0038
	16. 14—23. 58	7·73	+ 3·7	+ ·0011	+ ·0085				12	1·8	·0005	0·64	5. 48—14. 7	8·32	+ ·0008	+ ·0067
													14. 7—23. 59	9·87	− ·0023	− ·0227
May 25	0. 0— 7. 0	7·00	+ 1·8	+ ·0005	+ ·0035				10	1·4	·0004	0·70	0. 0— 1. 38	1·63	+ ·0022	+ ·0036
	7. 0— 9. 37	2·62	− 3·7	− ·0011	− ·0029				4	4·8	·0014	0·65	1. 38— 3. 12	1·57	− ·0004	− ·0006
	9. 37—13. 55	4·30	+ 0·2	+ ·0001	+ ·0004	+ ·0004	23·63	·0000	6	1·5	·0004	0·72	3. 12—23. 59	20·78	+ ·0007	+ ·0146
	13. 55—17. 30	3·58	− 1·9	− ·0006	− ·0021				6	1·7	·0005	0·60				
	17. 30—22. 21	4·85	+ 1·3	+ ·0004	+ ·0019				11	2·3	·0007	0·44				
	22. 21—23. 38	1·28	− 1·2	− ·0003	− ·0004				1	1·0	·0003	1·28				
1855.																
March 12	0. 0— 7. 45	7·75	+ 4·8	+0·0014	+0·0109				21	1·7	0·0005	0·37	0. 34— 4. 0	3·43	+0·0010	+0·0034
	7. 45— 8. 16	0·52	− 2·0	− ·0006	− ·0003				3	2·6	·0008	0·17	4. 0—23. 59	19·98	− ·0027	− ·0540
	8. 16— 8. 57	0·68	+ 1·0	+ ·0003	+ ·0002	−0·0117	23·99	−0·0005	3	3·0	·0009	0·23				
	8. 57—16. 52	7·92	−11·0	− ·0032	− ·0253				21	2·9	·0008	0·38				
	16. 52—23. 59	7·12	+ 1·4	+ ·0004	+ ·0028				7	1·4	·0004	1·02				
April 4	0. 20— 5. 35	5·25	+ 4·2	+ ·0012	+ ·0063				11	1·8	·0005	0·48	0. 24— 2. 11	1·78	− ·0004	− ·0007
	5. 35—18. 8	12·54	− 3·7	− ·0011	− ·0138	− ·0028	23·64	− ·0001	37	2·5	·0007	0·34	2. 11— 4. 38	2·45	+ ·0004	+ ·0010
	18. 8—23. 59	5·85	+ 2·8	+ ·0008	+ ·0047				7	1·2	·0003	0·84	4. 38— 8. 22	3·73	− ·0013	− ·0048
													8. 22— 9. 40	1·30	+ ·0004	+ ·0005
													9. 40—11. 39	1·98	− ·0010	− ·0020
													11. 39—12. 49	1·17	+ ·0007	+ ·0008
													12. 49—23. 59	11·17	− ·0005	− ·0056
July 19													0. 0— 8. 29	8·48	+ ·0023	+ ·0195
													8. 29—22. 47	14·30	− ·0032	− ·0458
Oct. 18	0. 15— 8. 18	8·05	+ 2·1	+ ·0006	+ ·0048				13	2·5	·0007	0·62	0. 0— 1. 47	1·78	+ ·0006	+ ·0011
	8. 18—15. 28	7·17	− 6·8	− ·0020	− ·0143	− ·0052	23·74	− ·0002	18	2·7	·0008	0·40	1. 47—23. 59	22·20	− ·0022	− ·0488
	15. 28—23. 59	8·52	+ 1·8	+ ·0005	+ ·0043				9	1·2	·0003	0·95				
1856.	No days of great disturbance throughout the year.															
1857.																
Feb. 26	1. 24— 8. 48	7·40	+ 1·9	+0·0006	+0·0044				13	0·6	0·0002	0·57	1. 22— 9. 13	7·85	+0·0006	+0·0047
	8. 48—14. 43	5·92	− 5·5	− ·0016	− ·0095	+0·0014	22·59	+0·0001	14	1·8	·0005	0·42	9. 13—23. 59	14·77	− ·0009	− ·0133
	14. 43—23. 59	9·27	+ 2·4	+ ·0007	+ ·0065				14	0·8	·0002	0·66				
March 13	0. 0— 7. 5	7·08	+ 1·9	+ ·0006	+ ·0042				16	0·5	·0001	0·44				
	7. 5— 9. 37	2·53	− 9·5	− ·0028	− ·0071	+0·0052	23·16	+0·0002	5	7·2	·0021	0·51				
	9. 37—23. 10	13·55	+ 2·2	+ ·0006	+ ·0081				16	0·5	·0001	0·85				
May 7	0. 0— 8. 5	8·08	+ 5·1	+ ·0015	+ ·0121				37	1·2	·0003	0·22	0. 0— 5. 18	5·30	+ ·0029	+ ·0154
	8. 5—15. 23	7·30	−11·5	− ·0033	− ·0241	+ ·0207	23·98	+ ·0009	28	5·0	·0015	0·26	5. 18— 7. 8	1·83	− ·0008	− ·0015
	15. 23—23. 59	8·60	+13·1	+ ·0038	+ ·0327				25	3·3	·0010	0·34	7. 8— 7. 36	0·47	+ ·0001	·0000
													7. 36—23. 59	16·38	− ·0034	− ·0557
„ 10	0. 0— 7. 48	7·80	+ 1·3	+ ·0004	+ ·0031				16	0·8	·0002	0·49	0. 0—14. 26	14·43	+ ·0022	+ ·0317
	7. 48— 9. 36	1·80	− 1·3	− ·0004	− ·0007				7	1·6	·0005	0·25	14. 26—15. 57	1·52	− ·0007	− ·0011
	9. 36—10. 6	0·50	+ 0·2	+ ·0001	+ ·0001				3	0·6	·0002	0·17	15. 57—17. 18	1·35	+ ·0009	+ ·0012
	10. 6—12. 33	2·45	− 0·7	− ·0002	− ·0005				3	0·5	·0001	0·82	17. 18—22. 6	4·80	− ·0010	− ·0048
	12. 33—13. 18	0·75	+ 0·5	+ ·0001	+ ·0001	+ ·0056	23·75	+ ·0002	3	1·2	·0003	0·25				
	13. 18—15. 6	1·80	− 1·1	− ·0003	− ·0005				8	1·0	·0003	0·23				
	15. 6—17. 0	1·90	+ 0·9	+ ·0003	+ ·0006				3	4·7	·0014	0·63				
	17. 0—19. 45	2·75	− 1·7	− ·0005	− ·0014				9	0·9	·0003	0·31				
	19. 45—23. 45	4·00	+ 4·1	+ ·0012	+ ·0048				8	0·7	·0002	0·50				
Sept. 3	0. 0— 6. 46	6·77	+ 3·1	+ ·0009	+ ·0061				5	1·3	·0004	1·35	0. 0—10. 23	10·38	+ ·0012	+ ·0125
	6. 46—10. 10	3·40	− 3·3	− ·0010	− ·0034				8	1·6	·0005	0·43	10. 23—15. 31	5·13	− ·0022	− ·0113
	10. 10—11. 19	1·15	+ 2·7	+ ·0008	+ ·0009	− ·0124	23·98	− ·0005	2	9·7	·0028	0·58	15. 31—16. 22	0·85	+ ·0003	+ ·0003
	11. 19—18. 37	7·30	− 9·8	− ·0029	− ·0212				28	3·2	·0009	0·26	16. 22—23. 59	7·62	− ·0036	− ·0274
	18. 37—22. 0	3·38	+ 5·4	+ ·0016	+ ·0054				9	4·6	·0013	0·38				
	22. 0—23. 59	1·98	− 0·4	− ·0001	− ·0002				3	1·0	·0003	0·66				
Nov. 12	0. 0— 8. 42	8·70	+ 4·2	+ ·0012	+ ·0104				20	1·5	·0004	0·44	0. 0— 5. 51	5·85	+ ·0005	+ ·0029
	8. 42—13. 0	4·30	− 7·6	− ·0022	− ·0095	+ ·0163	23·25	+ ·0007	11	2·7	·0008	0·39	5. 51— 6. 40	0·82	− ·0004	− ·0003
	13. 0—23. 15	10·25	+ 5·0	+ ·0015	+ ·0154				16	1·8	·0005	0·64	6. 40—11. 34	4·90	+ ·0010	+ ·0049
													11. 34—23. 16	11·70	− ·0007	− ·0081

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h				h
			1	0·0001	1·57
			8	·0008	0·53
−0·0196	23·99	−0·0008	23	·0007	0·36
			17	·0005	0·58
			4	·0011	0·41
+ ·0176	23·98	+ ·0007	3	·0010	0·52
			45	·0006	0·46
			13	0·0005	0·26
−0·0506	23·41	−0·0022	46	·0005	0·43
			5	·0005	0·36
			4	·0006	0·61
			15	·0007	0·25
− ·0108	23·58	− ·0005	4	·0019	0·32
			6	·0007	0·33
			3	·0013	0·39
			16	·0005	0·70
			29	·0006	0·29
− ·0263	22·78	− ·0012	51	·0005	0·28
			4	·0002	0·45
− ·0477	23·98	− ·0020	56	·0005	0·40
			4	0·0007	1·96
−0·0086	22·62	−0·0004	17	·0005	0·87
			23	·0007	0·23
			6	·0005	0·30
− ·0418	23·98	− ·0017	2	·0009	0·24
			71	·0009	0·23
			44	·0005	0·33
+ ·0270	22·10	+ ·0012	5	·0005	0·30
			5	·0006	0·27
			11	·0002	0·44
			28	·0004	0·37
− ·0259	23·98	− ·0011	23	·0009	0·22
			4	·0008	0·21
			37	·0007	0·21
			12	·0006	0·49
− ·0006	23·27	·0000	4	·0004	0·20
			20	·0005	0·24
			22	·0004	0·53

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m h m	h					h					h
0. 15—14. 24	14·15	+0·0015	+0·0039	+0·0552				9	0·0003	0·0008	1·57
14. 24—23. 59	9·58	− ·0014	− ·0036	− ·0345	+0·0207	23·73	+0·0009	12	·0002	·0005	0·80
0. 5— 1. 8	1·05	+ ·0003	+ ·0008	+ ·0008				1	·0002	·0005	1·05
1. 8—17. 30	16·37	− ·0011	− ·0029	− ·0475				21	·0003	·0008	0·78
17. 30—20. 59	3·48	+ ·0005	+ ·0013	+ ·0045	− ·0653	23·90	− ·0027	7	·0002	·0005	0·50
20. 59—23. 59	3·00	− ·0030	− ·0077	− ·0231				3	·0013	·0033	1·00
0. 32—23. 59	23·45	−0·0035	−0·0090	−0·2111	−0·2111	23·45	−0·0090	23	0·0003	0·0008	1·02
0. 28—12. 0	11·53	− ·0005	− ·0013	− ·0150				15	·0002	·0005	0·77
12. 0—20. 46	8·77	+ ·0006	+ ·0015	+ ·0132	− ·0018	20·30	− ·0001	4	·0002	·0005	2·19
0. 0—13. 27	13·45	+ ·0009	+ ·0023	+ ·0309	− ·0101	23·45	− ·0004	11	·0003	·0008	1·22
13. 27—23. 27	10·00	− ·0016	− ·0041	− ·0410				10	·0002	·0005	1·00
0. 0—23. 50	23·83	+ ·0017	+ ·0044	+ ·1049	+ ·1049	23·83	+ ·0044	13	·0003	·0008	1·83
0. 37—23. 48	23·18	−0·0023	−0·0059	−0·1368	−0·1368	23·18	−0·0059	10	0·0005	0·0013	2·32
1. 13—23. 51	22·63	− ·0055	− ·0141	− ·3191	− ·3191	22·63	− ·0141	58	·0003	·0008	0·39
0. 0—11. 18	11·30	+ ·0013	+ ·0033	+ ·0373				4	·0004	·0010	2·83
11. 18—23. 59	12·68	− ·0016	− ·0041	− ·0520	− ·0147	23·93	− ·0006	9	·0003	·0008	1·41
0. 0— 3. 39	3·65	+ ·0001	+ ·0003	+ ·0011				1	·0004	·0010	3·65
3. 39—23. 59	20·33	− ·0080	− ·0206	− ·4188	− ·4177	23·98	− ·0174	36	·0003	·0008	0·56

No Photographic Trace.

Month and Day	DECLINATION MAGNET. Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.	HORIZONTAL Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Aggregate Disturbance by Wave.
1857.	h m — h m	h	′				h			′		h	h m — h m	h		
Nov. 16	1. 42 — 13. 8	11·42	− 5·2	−0·0015	−0·0172	−0·0073	21·32	−0·0003	20	3·2	0·0009	0·57	0. 0— 4. 30	4·50	+0·0002	+0·0009
	13. 8—22. 59	9·85	+ 3·4	+ ·0010	+ ·0099				21	1·3	·0004	0·47	4. 30—11. 4	6·57	− ·0010	− ·0066
													11. 4—20. 1	8·95	+ ·0009	+ ·0081
													20. 1—23. 20	3·32	− ·0018	− ·0060
,, 17	1. 13— 2. 46	1·55	+ 0·5	+ ·0001	+ ·0002				1	1·8	·0005	1·55	1. 29—11. 52	10·38	− ·0014	− ·0145
	2. 46—15. 51	13·08	− 8·5	− ·0025	− ·0327	− ·0049	22·76	− ·0002	25	3·1	·0009	0·52	11. 52—16. 14	4·37	+ ·0007	+ ·0031
	15. 51—23. 59	8·13	+11·7	+ ·0034	+ ·0276				16	2·1	·0006	0·51	16. 14—23. 59	7·75	− ·0021	− ·0163
Dec. 16	0. 0— 5. 4	5·07	− 1·7	− ·0005	− ·0025				2	0·4	·0001	2·54	0. 0—15. 9	15·15	+ ·0014	+ ·0212
	5. 4— 7. 43	2·65	+ 0·4	+ ·0001	+ ·0003				4	0·5	·0001	0·66	15. 9—23. 24	8·25	− ·0065	− ·0536
	7. 43— 9. 0	1·28	− 0·7	− ·0002	− ·0003	− ·0021	23·98	− ·0001	3	1·0	·0003	0·43	23. 24—23. 59	0·58	+ ·0034	+ ·0020
	9. 0—17. 36	8·60	+ 7·6	+ ·0022	+ ·0189				23	3·6	·0010	0·37				
	17. 36—23. 59	6·38	− 9·8	− ·0029	− ·0185				34	6·0	·0017	0·19				
,, 17	1. 14— 2. 37	1·38	− 1·9	− ·0006	− ·0008				6	4·6	·0013	0·23	1. 23—23. 59	22·60	− ·0039	− ·0881
	2. 37— 3. 14	0·62	+ 1·6	+ ·0005	+ ·0003				4	5·2	·0015	0·16				
	3. 14— 4. 21	1·12	− 1·0	− ·0003	− ·0003				6	1·7	·0005	0·19				
	4. 21— 5. 16	0·92	+ 0·9	+ ·0003	+ ·0003				3	4·4	·0013	0·31				
	5. 16— 5. 41	0·42	− 1·6	− ·0005	− ·0002				2	2·0	·0006	0·21				
	5. 41— 6. 20	0·65	+ 1·3	+ ·0004	+ ·0003	− ·0086	22·76	− ·0004	4	2·7	·0008	0·16				
	6. 20— 7. 20	1·00	− 1·6	− ·0005	− ·0005				5	5·6	·0016	0·20				
	7. 20— 8. 15	0·92	+ 1·1	+ ·0003	+ ·0003				4	3·3	·0010	0·23				
	8. 15—14. 33	6·30	− 4·0	− ·0012	− ·0076				27	2·4	·0007	0·23				
	14. 33—15. 45	1·20	+ 3·3	+ ·0010	+ ·0012				5	2·7	·0008	0·24				
	15. 45—23. 59	8·23	− 0·7	− ·0002	− ·0016				12	0·7	·0002	0·69				

FORCE MAGNET.

Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Mean Period of Irregularity.
	h			h	
			7	0·0004	0·64
			19	·0003	0·35
−0·0036	23·54	−0·0002	25	·0002	0·36
			5	·0008	0·66
			32	·0004	0·32
− ·0277	22·5	− ·0012	14	·0006	0·31
			22	·0004	0·35
			26	·0006	0·58
− ·0304	23·98	− ·0013	54	·0024	0·15
			2	·0024	0·29
− ·0881	22·62	− ·0039	93	·0008	0·24

VERTICAL FORCE MAGNET.

Times of Beginning and End of Wave.	Length of the Wave in Time.	Mean Disturbance by Wave.	Equivalent in Terms of Horizontal Force.	Aggregate Disturbance by Wave.	Algebraic Sum of Aggregate Disturbance in the Day or Days.	Sum of Hours.	Mean Disturbance.	Number of Irregularities.	Mean Value of Irregularity.	Equivalent in Terms of Horizontal Force.	Mean Period of Irregularity.
h m	h					h					h
				No Photographic Trace.							
				No Photographic Trace.							
0. 0—23. 59	23·98	−0·0036	−0·0093	−0·2230	−0·2230	23·98	−0·0093	19	0·0003	0·0008	1·26
0. 0—12. 26	12·43	+ ·0015	+ ·0039	+ ·0485	+ ·0427	23·98	+ ·0018	27	·0003	·0008	0·46
12. 26—23. 59	11·55	− ·0002	− ·0005	− ·0058				3	·0002	·0005	3·85

RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

1863.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1863.)

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GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1863.

Introduction.

§ 1. *Buildings of the Magnetic Observatory.*

In consequence of a representation by the Astronomer Royal, and a memorial by the Board of Visitors of the Royal Observatory, addressed to the Lords Commissioners of the Admiralty, an additional space of ground on the south-east side of the former boundary of the Observatory grounds was inclosed from Greenwich Park for the site of a Magnetic Observatory, in the summer of 1837, and the Magnetic Observatory was erected in the spring of 1838. Its nearest angle in its present form is about 174 feet from the nearest point of the S.E. dome, and about 30 feet from the office of Clerk of Works. It is based on concrete and built of wood, united for the most part by pegs of bamboo; no iron was admitted in its construction, or in subsequent alterations. Its form, as originally built, was that of a cross with four equal arms, very nearly in the direction of the cardinal magnetic points as they were in 1838; the length within the walls, from the extremity of one arm of the cross to the extremity of the opposite arm, was 40 feet, the breadth of each arm 12 feet. In the spring of 1863, the northern arm was extended 8 feet. The height of the walls inside is 10 feet, and the ceiling of the room is about 2 feet higher. The northern arm of the cross is separated from the central square by a partition, so as to form an ante-room. The meridional magnet, for observations of absolute declination and of variations of declination (placed in its position in 1838), is mounted in the southern arm; and the theodolite by which its collimator is viewed, and by which circumpolar stars for determination of the astronomical meridian are also observed (for which observation an opening is made in the roof, with proper shutters) is in the southern arm, near the southern boundary of the central square. The bifilar magnet, for variations of horizontal magnetic force (erected at the end of 1840) is mounted near the northern wall of

the eastern arm. The horizontal photographic cylinder, which receives the traces of the movements of the declination-magnet and the horizontal-force-magnet, is near the south-eastern re-entering angle of the building. The balance-magnetometer for variations of vertical magnetic force (erected in 1841) is mounted near the northern wall of the western arm. About 8 feet east of it, and close to that wall, is the self-registering barometer (erected in 1848); and the vertical photographic cylinder which receives the traces of both is east (magnetic) of the balance-magnetometer and south of the barometer. The stands of the telescopes which are directed to the small reflectors of the horizontal-force and vertical-force magnetometers are near the theodolite, so that a person seated on a stool can conveniently command all three instruments. The mean-time-clock is in the southern arm, near the south-west re-entering angle; the standard barometer is near it, in the western arm; the sidereal-time-clock is near the self-registering barometer; the fire-grate (constructed of copper, as far as possible) is near the north end of the west side of the ante-room. Some of these fixtures may contain trifling quantities of iron; and, as the ante-room is used as a computing room, it is impossible to avoid the introduction of iron, in small quantities. On the outside, near the north-east corner of the ante-room, a pole 79 feet in height is fixed, for the support of the conducting wires to the electrometers; the electrometers, &c., are planted in the window-seat at the north-end of the ante-room. The apparatus for naphthalizing the gas used in the photographic registration was formerly fixed in a corner of the ante-room, but is now (1864) mounted in a small detached zinc-built room, erected in 1863, near the west side of the ante-room.

A small wooden building, in the direction S.S.E. (magnetic) from the Magnetic Observatory, 64 feet from its nearest angle, and very near the southern boundary of the grounds, was used till 1863 for the observation of Magnetic Dip; and another small building, in the direction S. (magnetic) from the Magnetic Observatory, 50 feet from the western angle of the southern arm, was used in 1861 and 1862 for the observation of Deflexions. In 1863, these buildings were removed, and a range of seven rooms, usually called the Magnetic Offices, was erected near the southern fence of the grounds. Since the summer of 1863, observations of Dip and Deflexion have been made in the westernmost of these rooms.

For better understanding of these descriptions, the reader is referred to the Descriptions of Buildings and Grounds with accompanying Maps, attached to the Volumes of Astronomical Observations for the years 1845 and 1862.

In 1864, a room was excavated below the whole of the Magnetic Observatory except the ante-room, and the bifilar-magnetometer and the balance-magnetometer were transferred to it, in positions vertically below their former positions; a new magnet and mounting being substituted in the latter instrument. The theodolite, which is in the same place as before, is supported on a brick pier which rises from the floor of the basement room into the upper room. For the meridional magnet, two

magnets are now used; one in the basement, which photographically registers the variations of declination; and one in the upper room, whose collimator is observed (as formerly) by the theodolite; these are in the same vertical, and about 10 inches north of the former position of the declination-magnet. The whole of the photographic apparatus, revolving cylinders, &c., is in the basement. The daily variation of temperature in the basement is usually about 1° of Fahrenheit; on very rare occasions it has amounted to 3°. The variation between summer and winter is about 6°, the temperature being maintained nearly at 60°.

§ 2. *Declination-Magnet and Apparatus for observing it.*

The theodolite with which the meridional magnet is observed is by Simms: the radius of its horizontal circle is 8·3 inches: it is divided to 5′, and reads to 5″, by three verniers, carried by the revolving frame of the theodolite. The fixed frame stands upon three foot-screws, which rest in brass channels let into a stone pier, that is firmly fixed in the ground and unconnected with the floor. The revolving frame carries the Y's (with vertical adjustment at one end) for a telescope with transit-axis: the length of the axis is $10\frac{1}{2}$ inches: the length of the telescope 21 inches: the aperture of the object glass 2 inches. The Y's are not carried immediately by the T head which crosses the vertical axis of the revolving frame, but by pieces supported by the ends of that T head, and projecting horizontally from it: the use of this construction is to allow the telescope to be pointed sufficiently high to see δ Ursæ Minoris above the pole. The eye-piece of the telescope carries only one fixed horizontal wire, and one vertical wire moved by a micrometer-screw. The opening in the roof of the building permits the observation of circumpolar stars, as high as δ Ursæ Minoris above the pole, and as low as β Cephei below the pole.

For supporting the magnet, a braced wooden tripod-stand is provided, resting on the ground and unconnected with the floor. Upon the cross-bars of the stand rests a double rectangular box (one box completely inclosed within another), both boxes being covered with gilt paper on their exterior and interior sides. On the southern side of the principal upright piece of the stand is a moveable upright bar, turning in the vertical E. and W. plane, upon a pin in its centre (which is fixed in the principal upright), and carrying at its top the pulleys for suspension of the magnet; this construction is adopted as convenient for giving an E. and W. movement to the point of suspension, by giving a motion to the lower end of the bar. The top of the upright piece carries a brass frame with two pulleys, whose axes are E. and W.: one of these pulleys projects beyond the north side of the principal upright, and from it depends the suspension skein: the other pulley projects on the south side: the suspension skein being brought from the magnet up to the north pulley is carried over it and over the south pulley, and is then attached

to a leathern strap, which passes downwards to a small windlass, carried by the lower part of the moveable upright. The height of the two pulleys above the floor is about 11 ft. 9 in., and the height of the magnet is about 3 ft. 0 in.,; so that the length of the free suspending skein is about 8 ft. 9 in.

The magnet was made by Meyerstein, of Göttingen: it is a bar 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick: it is of hard steel throughout. The magnet carrier was also made by Meyerstein, but it has since been altered by Simms. The magnet is not inserted endways in this support, but sideways, a double square hook being provided for sustaining it; and the upper part of the magnet carrier is simply hooked into the skein.

The suspending skein is of silk fibre, in the state in which it is first prepared by silk manufacturers for further operations; namely, when seven or more fibres from the cocoon are united by juxtaposition only (without twist) to form a single thread. The skein is strong enough to support perhaps three times the weight of the magnet, &c.

Upon the magnet there slide two brass frames, firmly fixed in their places by means of pinching-screws. One of these contains, between two plane glasses, a cross of delicate cobwebs; the other holds a lens of 13 inches focal length and nearly 2 inches aperture. This combination, therefore, serves as a collimator without a tube: the cross of cobwebs is seen very well with the theodolite-telescope, when the suspension-bar of the magnet is so adjusted as to place the object-glass of the collimator in front of the object-glass of the theodolite, their axes coinciding. The wires are illuminated by a lamp and lens in the night, and by a reflector in the day.

In order to diminish the extent of vibrations of the magnet, a copper bar, about one inch square, is bent into a long oval form, intended to contain within itself the magnet (the plane of the oval curve being vertical). A lateral bend is made in the upper half of the oval, to avoid interference with the suspension-piece of the magnet. The effect of this copper bar is very striking. It appears, from rough experiments, that every second vibration of the magnet (that is, when a direct and reverse swing have been finished) is reduced in the proportion of 5 : 2 nearly.

On mounting the photographic apparatus in June, 1847, the old torsion-circle and suspension-stirrup were removed, and a new suspension-stirrup was mounted, firmly united with an upright rod 7·9 inches in length, the top of which is connected by an adjustible circular horizontal movement (firmly clamped while in use) to an upright frame $5\frac{1}{2}$ inches high, to which are attached the necessary clips for carrying a concave mirror 5 inches in diameter, with its face vertical, and its lower edge 4 inches above the exterior wooden box. At the top of this frame is a torsion-circle with a hook, which is simply hooked into the end of the silk skein. The skein is necessarily shortened several inches, and the weight of the suspending apparatus is considerably increased. The support of the magnet by this new apparatus does not in any degree interfere with the facilities of observing with the telescope in the ancient method.

Observations relating to the permanent Adjustments of the Declination Magnet and its Theodolite.

1. Determination of the inequality of the pivots of the theodolite-telescope.

1862, December 26. The theodolite was clamped, so that the transit axis was at right angles to the astronomical meridian. The illuminated end of the axis of the telescope was first placed to the East: the level was applied, and its scale was read; the level was then reversed, and its scale was again read; it was then again reversed, and again read, and so on successively six times. The illuminated end of the telescope was then placed to the West, and the level was applied and read as before. This process was repeated four times, and the result was that when the level indicates the axis to be horizontal, the axis at the illuminated end is really too low by $0''{\cdot}3$ nearly.

2. Value of one revolution of the micrometer-screw of the theodolite telescope.

1862, December 26. The magnet was made to rest on blocks of wood, and its collimator was used as a fixed mark at an infinite distance. The micrometer was placed in different positions, and the telescope of the theodolite was then turned till the micrometer wire bisected the cross. The result of ten comparisons of theodolite-readings with large values and small values of the micrometer-reading was, that one revolution $= 1'.33''{\cdot}85$. This agrees with the result of observations made in preceding years.

3. Determination of the micrometer-reading for the line of collimation of the theodolite-telescope.

1862, December 26. The vertical axis of the theodolite had been adjusted to verticality, and the transit axis was made horizontal. The declination-magnet was made to rest on blocks, and the cross-wires carried by it were used as a collimator for determining the line of collimation of the telescope of the theodolite. The telescope was reversed after each observation. The mean of 20 double observations was $99^{r}{\cdot}994$.

4. Determination of the effect of the mean-time-clock on the declination-magnet.

The observations by which this has been determined are detailed in the volumes for 1840, 1841, 1844, and 1845. It appears that it is necessary to add $9''{\cdot}41$ to every reading of the theodolite.

5. Determination of the compound effects of the vertical-force-magnet and the horizontal-force-magnet on the declination-magnet.

The details applying to the effect of the horizontal-force-magnet and first vertical-force-magnet will be found in the volumes for 1840, 1841, 1844, and 1845. It appeared that it was necessary to subtract 55″·22 from all readings of the theodolite. In 1848 a new vertical-force-magnet was introduced, and the subtractive quantity was now found to be 42″·2.

6. Determination of the error of collimation for the plane glass in front of the boxes of the declination-magnet.

1862, December 26. The magnet was made to rest entirely on blocks. The micrometer-head of the telescope was to the East. The plane glass has the word "top" engraved on it, and this word is always kept upwards. The cross-wire carried by the collimator of the magnet was observed with the marked side of the glass alternately inside and outside the box. The result of 20 double observations was, that in the ordinary position of the glass 11″·5 is to be subtracted from all readings.

7. Determination of the error of collimation of the magnet-collimator, with reference to the magnetic axis of the magnet.

1862, December 27. Observations were made by placing the Declination-Magnet in its stirrup, with its collimator alternately W. and E. of it, and observing the collimator-wire by the theodolite-telescope; the moveable upright bar being so moved that the collimator in each observation was in the line of the theodolite-telescope. Sixteen pairs of observations were taken. The mean half excess of reading with collimator W. (its usual position) above that with collimator E. was 5′. 0″· 2. This was combined with the results of several preceding years, and 4′. 50″· 7 was adopted for use in 1863.

8. Miscellaneous causes of error.

In the volume for 1841, observations are exhibited shewing that the oval copper bar, or damper, had but little or no effect. Repeated observations, of less formal character, in succeeding years, have confirmed this result. The same bar has encircled the magnet throughout the year 1863. Observations made in the year 1865 appear to shew that the damper exercises a certain degree of drag on the needle, equivalent to a torsion-force of $\frac{1}{120}$.

In the volume for 1841, observations are exhibited shewing that the effect of the grate in the ante-room is insensible.

In the volume for 1842, observations are exhibited shewing that the iron attached to the electrometer pole has little or no effect on the magnet.

9. Calculation of the constant used in the reduction of the observations of the declination-magnet, the micrometer-head of the theodolite-telescope being East.

		°	′	″
Micrometer equivalent for reading for line of collimation, 99·994	—	2.	36.	24·4
Correction for the plane glass in front of the box, in its usual position	—			11·5
Correction due to the compound effect of the horizontal force magnet and the vertical force magnet	—			42·2
	—	2.	37.	18·1
Correction for the effect of the mean time clock	+			9·4
	—	2.	37.	8·7
The collimator West of the magnet. Correction for error of collimation	+	4.	50·	7
Constant used in the reduction of the observations	—	2.	32.	18·0

10. Determination of the time of vibration of the declination-magnet under the action of terrestrial magnetism.

It is known, from constant observation, that the time of a single vibration is as nearly as possible 30^s; but no observations are recorded which merit distinct reference.

11. Fraction expressing the proportion of the torsion-force to the earth's magnetic force.

In the Introduction to the Magnetical Observations 1847, the process is given in great detail by which the torsion force of the skein then supporting the magnet was found to be $\frac{1}{100}$ of the earth's magnetic force: as determined by the proportion of the disturbance in the position of the magnet, produced by turning the torsion-circle through a measured angle, to that measured angle. For the skein which broke in 1848, a similar skein was substituted; and observations made in nearly every year to 1864, gave sensibly the same result.

DETERMINATION OF THE READINGS OF THE HORIZONTAL CIRCLE OF THE THEODOLITE CORRESPONDING TO THE ASTRONOMICAL MERIDIAN.

The error of the level is determined by application of the spirit-level at the time of observation: due regard being paid, in the reduction, to the inequality of pivots already found. One division of the level is considered = 1″·0526. The azimuth-reading is then corrected by this quantity;

Correction = Elevation of W. end of axis × tan star's altitude.

The readings of the azimuth circle increase as the instrument is turned from N. to E., S., and W.; from which it follows that the correction must have the same sign as the elevation of the W. end.

The correction for the azimuth of the star observed has been computed independently in every observation, by a peculiar method, of which the principle is fully explained

in the volumes for 1840, 1841, 1843, 1844, 1845. The formula and table used are the following :—

Let $A_{''}$ = seconds of arc in star's azimuth,
C_s = seconds of time in star's hour-angle,
$a_{''}$ = seconds of arc in star's N.P.D. for the day of observation,
Then log. $A_{''}$ = log. C_s + log. E + log. $(a_{''} + F)$ + log. cos φ.

The values of log. E, F, and log. cos φ, are given in the following table :—

TABULATED VALUES of LOG. COS φ, for DIFFERENT VALUES of C_s, and of the QUANTITIES LOG. E and F, for the STARS POLARIS and δ URSÆ MINORIS.

Hour Angle.	Log. Cos φ for			
	Polaris.	Ursæ Minoris.	Polaris S.P.	δ Ursæ Min. S.P.
m				
1	9·99999	9·99999	9·99999	9·99999
2	999	999	999	999
3	999	999	999	999
4	998	998	998	998
5	996	996	997	997
6	994	994	996	996
7	992	992	994	995
8	990	989	992	993
9	988	986	990	991
10	985	983	988	989
11	981	979	985	987
12	978	975	982	984
13	974	971	979	981
14	970	966	975	978
15	966	961	972	975
16	961	955	968	971
17	956	950	964	968
18	951	944	959	964
19	945	937	955	960
20	941	930	950	956
21	932	923	945	951
22	926	915	939	946
23	919	908	933	941
24	912	900	928	936
25	904	891	922	930
26	896	882	915	925
27	888	873	909	919
28	880	863	902	912
29	871	853	894	906
30	9·99862	9·99843	9·99887	9·99900
Log. E	6·09721	6·13658	—6·03899	—6·00617
F	—186″·79	—944″·71	+181″·57	+886″·86

Observations for determining the readings for the astronomical meridan were made on the following days in 1863 :—January 8, 27, February 5, 28, April 1, 15, May 2, 16,

June 1, 17, July 27, August 8, 31, October 14, 31, December 2, and 12. As a check on the continued steadiness of the theodolite, observations of a fixed mark (a small hole in a plate of metal above the Observatory Library, illuminated by a reflector of sky-light in the day and by a lamp at night,) have been taken about thirty times at nearly equal intervals through the year.

The following is a description of the method of making and reducing the eye-observations of the declination-magnet :—

A fine horizontal wire (as stated above) is fixed in the field of view of the theodolite-telescope, and another fine vertical wire is fixed to a wire-plate, moved right and left by a micrometer screw. On looking into the telescope, the cross of the magnetometer is seen ; and during the vibration of the magnet, this cross is seen to pass alternately right and left. The observation is made by turning the micrometer till its wire bisects the image of the magnet-cross at the pre-arranged times, and reading the micrometer. The verniers of the horizontal circle are read.

The mean-time clock is kept very nearly to Greenwich mean time (its error being ascertained each day), and the clock-time for each determination is arranged beforehand.

If the magnet is in a state of disturbance, the first observation is made by the observer applying his eye to the telescope about one minute before the pre-arranged time ; he bisects the magnet-cross by the micrometer wire at 45^s, and again at 15^s before that time, also at 15^s and 45^s after that time. The intervals of these four observations are therefore the same as the time of vibration of the magnet, and the mean of all the times is the same as the Greenwich pre-arranged mean time.

The mean of each pair of adjacent readings of the micrometer is taken (giving three means), and the mean of these three is adopted as the result. In practice, this is done by adding the first and fourth readings to the double of the second and third, and dividing the sum by 6.

The number of instances in which the magnet was observed in a state of vibration during the year 1863 is very small. Indeed, since the introduction (1842, June 16) of the double box covered with gilt paper, for inclosing the magnet, instead of the flat drum with glass top furnished by Mr. Meyerstein, it is found that the magnet is seldom in a state of vibration ; and it passes from one position of rest to another, sometimes through a large arc, without vibration. When the magnet is found to be thus free from vibration, two bisections only of the cross are made, one about 15^s before the time recorded, the other about 15^s after that time (30^s being nearly the time of a single vibration).

The adopted result is converted into arc, supposing $1^r = 1'.\ 33''{\cdot}85$, and the quantity thus deduced is added to the mean of the vernier-readings, from which is subtracted the constant given in article 9 of the permanent adjustments ; the difference between this number and the adopted reading for the Astronomical South Meridian is taken ;

and thus is deduced the magnetic declination, which is used in determining the zero for the photographic register.

§ 3. *Photographic self-registering Apparatus for Continuous Record of Magnetic Declination.*

The general principle adopted for all the photographic instruments is the same. The photographic paper is wrapped round a glass cylinder, and the axis of the cylinder is made parallel to the direction of the movement which is to be registered. The cylinder is turned by clock-work, with uniform velocity. The spot of light (for the magnets and barometer) or the boundary of the line of light (for the thermometers) moves, with the movements which are to be registered, in the direction of the axis of the cylinder, while the cylinder itself is turned round. Consequently, when the paper is unwrapped from its cylindrical form, there is traced upon it (though not visible till the proper chemical agents have been applied) a curve, of which the abscissa measured in the direction of a line surrounding the cylinder is proportional to the time, while the ordinate measured in the direction parallel to the axis of the cylinder is proportional to the movement which is the subject of measure.

In the instruments for registering the motions of the magnets and barometer, a line of abscissæ is actually traced on the paper, by a lamp giving a spot of light in an invariable position, the effect of which on the revolving paper is to trace a line surrounding the cylinder. For the thermometers this is not necessary, as the thermometer-scales are made to carry and to transfer to the photographic paper sufficient indications of the actual reading of the thermometers.

Every part of the cylinder-apparatus except those on which the spots of light fall is covered with a double case of blackened zinc, having a slit for each moveable spot of light and a hole for the invariable spot; and every part of the path of the photographic light is protected by blackened zinc tubes from the admixture of extraneous light.

In all the instruments, the following method is used for attaching, to the sheet of photographic paper, indications of the time when certain parts of the photographic trace were actually made, and for giving the means of laying down a time-scale applicable to every part of the trace. By means of a small moveable plate, arranged expressly for this purpose, the light which makes the trace can at any moment be completely cut off. An assistant, therefore, occasionally cuts off the light (registering in the proper book the clock-time of doing so), and after a few minutes withdraws the plate (again registering the time). The effect of this is to make a visible interruption in the trace, corresponding to registered times. By drawing lines from these points of interruption parallel to the axis of the cylinder, to meet the photographic line of

abscissæ, or an adopted line of abscissæ parallel to it, points are defined upon the line of abscissæ corresponding to registered times. The whole length of the photographic sheet (except where one end, in the cylindrical arrangement, laps over the other) corresponds to the known time of revolution of the cylinder. A scale being prepared beforehand, whose value for the time of revolution corresponds to the circumference of the cylinder, and the scale-reading for the registered time of interruption of light being applied to the foot of the ordinate corresponding to that interruption, the divisions of hours and minutes may be transferred at once from the scale to the line of abscissæ. In practice it is found that the length of the paper is not always the same, and it is necessary, therefore, to use a scale (a separate one for each separate instrument) which will admit of small expansion and contraction, preserving the proportion of its different parts unaltered. A scale of vulcanized caoutchouc, mounted on a small frame in which one end of the scale is fixed while the other is drawn by a screw, is found to answer extremely well.

One of the revolving cylinders is used for the photographic record of the Declination Magnet and the Horizontal Force Magnet. In the actual positions of these two magnets it was found that the line, drawn from the suspending skein of the declination-magnet to the center of the two suspending lines of the bifilar or horizontal-force-magnet, passed through the internal projection of the south-eastern re-entering angle of the building, but by so small a quantity that I judged it best to plant the apparatus for registry of the two instruments close to that re-entering angle. (In the preparation of the basement in 1864, to which allusion has been made in pages *iv* and *v*, this re-entering angle is cut away, so that the straight line from the suspending skein of the declination-magnet to the center of the bifilar magnet passes through a clear space, in which the registering apparatus is now placed). The first thing to be described is the arrangement of glass cylinders. One glass cylinder with a hemispherical extremity (in all respects similar to those used as shades or protectors of small clocks, works of art, &c.), $11\frac{1}{2}$ inches long in its cylindrical part, and $14\frac{1}{2}$ in circumference, is covered internally with a black pigment, and is stopped at the open end by insertion in a metallic cap, in the center of which is a short spindle and winch-arm. Round this cylinder the photographic paper is wrapped, and the moisture on the photographic paper agglutinates its overlapping ends with sufficient firmness. The cylinder and mounted paper are then covered by another glass cylinder with hemispherical end, whose open end is fixed, by friction, on the rim of the metallic cap to which the inner cylinder is attached, a collar of tape being inserted between. In this state the cylinders are placed in their working-mounting; the short spindle in the cap, and the large cylinder near its hemispherical end, rest upon friction-rollers, the axis of the cylinder being horizontal. The winch-arm is lodged in a fork at the end of the hour-hand of a timepiece, which is made for the purpose, not exceeding in size an ordinary box-chronometer, but with very strong wheels and powerful spring,

and with duplex escapement. In order to avoid the ordinary shake of the hour-hand of a clock, due to the play of the motion-wheels under the dial, the hour-hand is placed upon the central axis, and the second wheel, which is usually placed in the center and carries the minute hand, is placed on one side. The cylinder was orignally made to turn in twelve hours; but, as this construction sometimes required a change of the photographic sheet every twelve hours, the wheels of the time-piece were changed, to make the cylinder turn in twenty-four hours.

The light, by which the trace of the declination-magnet is made, originates in a lamp (formerly of camphine, but, since 1849, of coal-gas charged with the vapour of coal-naphtha) placed slightly out of the direction of a straight line drawn from the suspension-skein of the magnet to the center of the photographic sheet. Before the flame of the lamp is placed a small aperture, about $0^{in}{\cdot}3$ high and $0^{in}{\cdot}01$ broad, independent of the lamp, and supported by a part of the same frame which carries the magnet. The light from the aperture falls upon a concave mirror of speculum-metal, 5 inches in diameter, and about 26 inches from the aperture. This concave mirror is above the top of the box; it is carried by a part of the magnet-carrier, which, although it has a small movement of adjustment relative to the magnet-carrier, is in practice very firmly clamped to it, so that the mirror receives all the angular movements of the magnet. By the concave mirror, the light diverging from the aperture is made to converge to a place nearly on the surface of the cylinder of photographic paper whose distance from the mirror is about 11·8 feet. The form of the aperture, however, and the astigmatism caused by the inclined reflexion from the mirror, produce this effect, that the image is somewhat elongated in the vertical direction, and is at the same time slightly curved. To diminish the length there is placed near the cylinder a plano-convex cylindrical lens of glass, with its axis horizontal, and the image is thus reduced to a neat spot of light.

The spot of light from the concave mirror of the declination-magnet is received on the south side of the cylinder, near its west end.

Near the east end of the cylinder is placed a gas lamp, shining by reflexion through a small fixed aperture above the cylinder, from which the light falls upon a small cylindrical lens, by which a very delicate and well-defined photographic trace is marked upon the paper, in a fixed position, intermediate between the photographic curves of the declination and horizontal force magnets. This is the photographic base-line, or line of abscissæ, to which allusion has been made above.

For the declination-magnet, the values, in minutes and seconds of arc, of movements of the photographic spot in the direction of the ordinate, are thus deduced from a geometrical calculation founded on the measures of different parts of the apparatus. The distance of the cylinder from the concave mirror is about 11·8 feet, and a movement of 1° of the mirror produces a movement of 2° in the reflected ray; and the normal to the axis of the cylinder is inclined about 7° to the reflected ray. From this it is

found that 1° of movement of the mirror is represented by 4·99 inch upon the photographic paper. A small scale of pasteboard is prepared, whose graduations correspond in value to minutes and seconds so calculated. The zero of the ordinate-scale is found in the following manner. The time-scale having been laid down as is already described, and actual observations of the position of the magnet having been made with the eye and the telescope, (as has been fully described above), at certain registered times, there is no difficulty (by means of these registered times) in defining the points of the photographic trace which correspond to the observed positions. The pasteboard scale being applied as an ordinate to one of these points, and being slid up and down till the scale reading which represents the reading actually taken by the eye-observation falls on that point, the reading of the scale where it crosses the line of abscissæ is immediately found. The various readings given by different observations, so long as there is no instrumental change, will scarcely differ, and may be combined in groups, and thus an adopted reading for the line of abscissæ may be obtained. From this, with the assistance of the same pasteboard scale, there will be laid down without difficulty a new line, parallel to that line of abscissæ, whose ordinate would represent some whole number of degrees, or other convenient quantity.

§ 4. *Horizontal Force Magnet and Apparatus for observing it.*

The horizontal-force-magnet, furnished by Meyerstein of Göttingen, is, like the declination-magnet, 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. For its support, a wooden tripod-stand is planted in the eastern arm of the Magnetic Observatory, resting immediately on the ground, and not touching the floor. This tripod supports an upright plank, to the top of which a brass frame is attached, carrying two brass pulleys (with their axes in the same east and west line) in front of the plank, and two (in a similar position) at the back of the plank; these constitute the upper suspension-piece. A small windlass is attached to the back of the plank at a convenient height. The magnet-carrier consists of two parts; the upper part is a vertical plate, having a pair of small pulleys attached to it, (whose axes are perpendicular to the plate), and connected below with the torsion-circle; the lower part is the magnet-stirrup, turning by stiff friction in the torsion-circle, and bearing a pointer above for reading its graduations, and bearing also a small plane mirror below, to which a fixed telescope is directed for observing by reflexion the graduations of a fixed scale (to be mentioned shortly). Under the two small pulleys of the vertical plate passes a skein of silk; its two branches rise up and pass over the front pulleys of the suspension-piece, then over its back pulleys, and then descend and pass under a single large pulley, whose axis is attached to a string that passes down to the windlass. Supported by the two branches of the skein, the magnet swings freely, but the direction that it takes will depend on the angular position of its stirrup with respect to the

vertical plate; it is intended that the index should be brought to such a position on the torsion-circle that the two suspending branches should not hang in one plane, but should be so twisted that their torsion-force will maintain the magnet in a direction very nearly E. and W. magnetic (its marked end being W.), in which state an increase of the earth's magnetic force draws the marked end towards the N., till the torsion resistance is sufficiently increased to resist it, or a diminution allows the torsion-force to draw it towards the S. The magnet, with its plane mirror, hangs within a double rectangular box (one box completely inclosed within another) covered with gilt paper, similar to that used for the declination-magnet; in its S. side there is one long hole, covered with glass, through which the rays of light from the scale enter to fall on the plane mirror, and the rays reflected by the mirror pass to the fixed telescope. The vertical rod, (below the pointer for indications of torsion-circle), which carries the magnet-stirrup, passes through a hole in the top of the box. The height of the brass pulleys of the suspension-piece above the floor is $11^{ft.}\ 5^{in.}$; that of the pulleys of the magnet-carrier is $3^{ft.}\ 8^{in.}$; and that of the center of the plane mirror is about $2^{ft.}\ 11^{in.}$. The distance between the branches of the silk skein, where they pass over the upper pulleys, is $1^{in.} : 48$; at the lower part the distance between them is $0^{in.}\cdot 92$.

An oval copper bar embraces the magnet (exactly similar to that for the declination-magnet), for the purpose of diminishing its vibrations.

The scale, which is observed by means of the plane mirror, is fixed to the South wall of the East arm of the magnetic observatory. The numbers of the scale increase from East to West, so that when the magnet is inserted in the magnet-cell with its marked end towards the West, increasing readings of the scale (as seen with a fixed telescope directed to the mirror which the magnet carries) denote an increasing horizontal force. A normal from the magnet-mirror to the scale meets it at the division 40 nearly.

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor without touching it, and are firmly connected with piles driven into the ground. Its position is such that an observer, sitting in a chair at a convenient place for observing the declination-magnet with the theodolite, can, by turning his head, look into the telescope which is directed to the mirror of this instrument. The angle between the normal to the scale (which usually coincides nearly with the normal to the axis of the magnet) and the axis of the telescope, is about 54°, and the plane of the mirror is therefore inclined to the axis of the magnet about 27°.

On 1847, August 21, the magnet-carrier for the photographic apparatus was mounted. It differs from that just described only in this respect, that the vertical plate with the two small pulleys is sufficiently raised to permit the descending rod to carry, between the torsion-circle and the top of the box, a concave mirror 4 inches in diameter. The form of this suspension is so exactly similar to that for the declination-magnet (the sole

differences being that the mirror is 4 inches in diameter, and that the suspending skein passes under two pulleys, as above described), that it is unnecessary here to give any further description of it.

Observations relating to the permanent Adjustments of the Horizontal-Force-Magnet.

1. Determination of the times of vibration and of the different readings of the scale for different readings of the torsion-circle, and the reading of the torsion-circle and the time of vibration when the magnet is transverse to the magnetic meridian.

To render the process intelligible, it may be convenient to premise the following explanation.

Suppose that the magnet is suspended in its stirrup which is firmly connected with the small plane mirror, with its marked end in a magnetic westerly direction (not exactly W., but in any westerly direction between N. and S.), and suppose that, by means of the telescope directed towards that mirror, the scale is read, or (which is the same thing) the position of the plane mirror and of the stirrup, and therefore that of the axis of the magnet, are defined. Now let the magnet be taken out of the stirrup and replaced with its marked end easterly. The terrestrial magnetic power will now act, as regards torsion, in the direction opposite to that in which it acted before, and therefore the magnet will not take the same position as before. But by turning the torsion-circle, which changes the amount and direction of the torsion-power produced by the oblique tension of the suspending cords, the magnet may be made to take the same position as before (which will be proved by the reading of the scale, as viewed in the plane mirror, being the same as before). The reading of the torsion-circle will be different from what it was before. The effect of this operation then is, to give us the difference of torsion-circle-readings for the same position of the magnet-axis with the marked end opposite ways, but it gives no information as to whether the magnet-axis is transverse to the meridian, inasmuch as the same operation can be performed whether the magnet-axis is transverse or not.

But there is another observation which will inform us whether the magnet-axis is or is not transverse. Let the time of vibration be taken in each position of the magnet. Resolve the terrestrial magnetic force acting on the poles of the magnet into two parts, one transverse to the magnet, the other longitudinal. In the two positions of the magnet (marked end westerly and marked end easterly, with axis in the same position), the magnitude of the transversal force is the same, and the changes which the torsion undergoes in a vibration of given extent are the same, and the time of vibration if there were no other force would be the same. But there is another force, namely the longitudinal force; and when the marked end is northerly, this tends from the center of the magnet's length, and when it is southerly it tends towards the center of the

magnet's length; and in a vibration of given extent this produces force, in one case increasing that from the torsion and in the other case diminishing it. The times of vibration therefore will be different. There is only one exception to this, which is when the magnet-axis is transverse to the magnetic meridian, in which case the longitudinal force vanishes.

The criterion then of the position truly transverse to the meridian (which position is necessary in order that the indications of our instrument may apply truly to changes of the magnitude of terrestrial magnetic force without regard to changes of direction) is this. Find the readings of the torsion-circle which, with magnet in reversed positions, will give the same readings of the scale as viewed by reflexion in the plane mirror, and will also give the same time of vibration for the magnet. With these readings of the torsion-circle the magnet is transverse to the meridian; and the difference of the readings of the torsion-circle is the difference between the position, when terrestrial magnetism acting on the magnet twists it one way, and the position when the same force twists it the opposite way, and is therefore double the angle due to the torsion-force of the suspending lines when they neutralize the force of terrestrial magnetism.

The following table exhibits the elements of one of the determinations made in 1863:—

1863. Day.	The Marked end of the Magnet.							
	West.				East.			
	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.
	°	div.	div.	s	°	div.	div.	s
January 2	138	19·34		22·26	227	17·75		21·10
			11·10				8·55	
	139	30·44		21·96	228	26·30		21·34
			8·50				9·81	
	140	38·94		21·92	229	36·11		21·44
			8·81				8·20	
	141	47·75		21·70	230	44·31		21·52
			8·88				10·91	
	142	56·63		21·84	231	55·22		21·72
			8·38				8·78	
	143	65·01		21·50	232	64·00		21·68
			10·88				9·08	
	144	75·89		21·48	233	73·08		21·80
			7·67				9·75	
	145	83·56		21·35	234	82·83		21·96
			8·54				8·67	
	146	92·10		20·92	235	91·50		22·04

The times of vibration and scale readings were sensibly the same, when the torsion-circle read 141°. 30′, marked end West, and 230°. 43′, marked end East, differing 89°. 13′. Half this difference, or 44°. 36′. 30″, is the angle of torsion when the magnet is transverse to the meridian.

The mean of several determinations gave 44°. 37′. 55″; the value which was used in the preceding year was 44°. 37′. 30″, and this value was adopted for the year 1863. The reading adopted for the torsion-circle, marked end of the magnet West, was 141°·30′ for the year.

2. Determination of the compound effect of the vertical-force-magnet and the declination-magnet on the horizontal-force-magnet, when suspended with its marked end towards the West.

The details of the experiments, made while the old vertical-force-magnet was in use, will be found in the volumes for 1841, 1842, 1843, 1844, 1845. The effect was to increase the readings by $0^{div.}\cdot 487$. On mounting a new vertical-force-magnet in 1848, similar experiments were made, and the resulting number was $0^{div.}\cdot 45$. These quantities are totally unimportant in their influence on the registers of changes of horizontal force.

3. Computation of the angle corresponding to one division of the scale, and of the variation of the horizontal force (in terms of the whole horizontal force) which moves the magnet through a space corresponding to one division of the scale.

It was found by accurate measurements, at the end of the year 1840, that the distance from $40^{div.}$ on the scale to the center of the face of the plane mirror is $8^{ft.}\ 5^{in.}\ 1$, and that the length of $30^{div.}\cdot 9$ of the scale is exactly 12 inches; consequently the angle at the mirror subtended by one division of the scale is $13'.\ 12''\cdot 32$, or, for one division of the scale, the magnet is turned through an arc of $6'.\ 36''\cdot 16$.

The adopted angle of torsion as mentioned above is $44°.\ 37'.\ 30''$; consequently the variation of horizontal force (in terms of the whole horizontal force) for a disturbance through one division of the scale, computed by the formula, "Cotan. angle of torsion $\times$ value of one division in terms of radius," is $0\cdot 001946$. This number has been used throughout the year 1863.

4. Determination of the correction for the effect of temperature on the horizontal force magnet.

In the Introduction to the volume of Magnetical and Meteorological Observations for 1847 will be found a detailed account of observations made in the years 1846 and 1847 for determination of this element. The principle adopted was that of observing the deflection which the magnet (to be tried) produces on another magnet; the magnet (to be tried) being carried by the same frame which carries the telescope that is directed to the plane mirror attached to the other magnet, and which also carries the scale that is viewed in these experiments by reflection in that plane mirror. The rotation of the frame was measured by a graduated circle about 23 inches in diameter. The magnet (to be tried) was always on the eastern side of the other magnet. It was enclosed in a copper trough, which was filled with water at different temperatures. One end of the magnet (to be tried) was directed towards the other magnet. The values found for correction of the results as to horizontal force found with the magnet at temperature $t°$, in order to reduce them to what they would have been if the

temperature of the magnet had been 32°, expressed as multiples of the whole horizontal force, were,*

When the marked end of the magnet (to be tried) was West,

$$0{\cdot}00007137\ (t-32) + 0{\cdot}000000898\ (t-32)^2$$

When the marked end of the magnet (to be tried) was East,

$$0{\cdot}00009050\ (t-32) + 0{\cdot}000000626\ (t-32)^2$$

The mean, or

$$0{\cdot}00008093\ (t-32) + 0{\cdot}000000762\ (t-32)^2$$

has been embodied in tables which have been used in the computation of the "Reduction of Magnetic Observations 1848–1857," attached to the Volume of Observations 1859, and in the computation for "Days of Great Magnetic Disturbance 1841–1857" attached to the volume for 1862.

This may be a convenient place for stating that observations made in the year 1864, in which the magnet has been heated by hot air instead of hot water, give a much larger value to the principal coefficient.

The method of observing with the horizontal-force magnet is the following:—

A fine vertical wire is fixed in the field of view of the telescope, which is directed to the plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed scale, mentioned in page *xvi*, are seen; and during the oscillations of the magnet, the divisions of the scale are seen to pass alternately right and left across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the observation of declination. The first observation is made by the observer applying his eye to the telescope 40^s before that time, and, if the magnet is in a state of vibration, he observes the next four extreme points of vibration of the scale, and the mean of these is adopted in the same manner as for the declination-observations; but if it is at rest, then at 10^s before the pre-arranged time, he notes the division of the scale bisected by the wire; and 20^s afterwards he notes whether the same division continues bisected, and if it does, that reading is adopted as the result.

The number of instances when the magnet was observed in a state of vibration during the year 1863 is very small.

Within the double box is suspended a thermometer, which is read at every hour of observation. On one day also of every week, the readings of the thermometer are taken at 18^h, 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, 6^h, 9^h, and 12^h. Commencing with the month of June, self-registering maximum and minimum thermometers were placed outside the box, and were read twice every day. All these readings are printed in the tables, with this exception only, that, when there are two maxima and two minima, the absolute maximum and absolute minimum only are printed.

* By inadvertence in printing the Introduction 1847, the letter t has been used in two different senses.

§ 5. *Photographic self-registering Apparatus for Continuous Record of Magnetic Horizontal Force.*

Much of the description of the photographic apparatus attached to the declination-magnet applies also to that which is attached to the horizontal-force-magnet. A concave mirror of speculum-metal, 4 inches in diameter, is carried by the magnet-carrier. The light of a lamp of naphthalized gas shines through a small aperture $0^{in.}{\cdot}3$ high, and $0^{in.}{\cdot}01$ broad (which is supported by the magnet-stand), at the distance of about 22 inches from the concave mirror, and is made to converge to a point, on the north surface and near the east end of the same revolving cylinder which receives the light from the concave mirror of the declination-magnet. A cylindrical lens parallel to the axis of the cylinder receives the somewhat elongated image of the source of light, and converts it into a well-defined spot. The motions of this spot parallel to the axis represent the angular movements of the magnet which are produced, by an increase of terrestrial magnetic force overcoming more completely the torsion-force of the bifilar suspension, or by a diminution of terrestrial force yielding to the torsion-force.

As the spot of light from the horizontal-force-mirror falls on the side of the cylinder opposite to that on which the light from the declination-mirror falls, the same time-scale will not apply to both; it is necessary to prepare a time-scale independently for each.

The following is the calculation by which the scale of horizontal force on the photographic sheet is determined. The distance between the surface of the concave mirror and the surface of the cylinder is 127·65 inches; consequently, one degree of angular motion of the magnet, producing two degrees of angular motion of the reflected ray, moves the spot of light through 4·4892 inches. Now the variation of horizontal force (in terms of the whole horizontal force) corresponding to one degree of angular motion of the magnet $=$ sin $1^\circ \times$ cotan $44^\circ.\ 37'.\ 30'' = 0{\cdot}017682$ nearly. From these numbers it is immediately found that a movement of the spot of light through 0·25388 inch corresponds to a variation of horizontal force expressed by 0·001. With this fundamental number, the graduations of the pasteboard scale for measure of horizontal force have been prepared.

§ 6. *Vertical-Force-Magnet, and Apparatus for observing it.*

The vertical-force-magnet, like the other two magnets, is 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. The magnet in use to 1848 was made by Robinson; that in use from 1848 to 1864 January 20 was by an unknown maker. Its supporting frame rests upon a block, connected with a tripod-stand which passes through the floor and rests immediately on the ground in the western arm of the Magnetic Observatory. Its position is as nearly as possible symmetrical with that of the

horizontal-force-magnet in the eastern arm. Upon the block is fixed the supporting frame, consisting of two pillars (connected at their bases) on whose tops are the agate planes upon which vibrate the knife-edges (to be mentioned immediately). The carrier of the magnet is a brass frame, to which are attached by clamps and pinching screws two steel knife-edges, each about $\frac{1}{2}$ inch long. In the frame first erected, the length of axis of vibration, from end to end of the knife-edges, was $2\frac{1}{2}$ inches; in the frame adapted to the photographic apparatus, and in use from 1848 to 1863, the length from end to end of the knife-edges is 7 inches. The axis of the magnet is as nearly as possible transverse to the meridian, its marked end being E. The axis of vibration is as nearly as possible N. and S. To the southern end of the brass frame, and projecting further south than the end of the knife-edge, is fixed a small plane mirror, whose plane makes with the axis of the magnet an angle of 54° nearly. The fixed telescope (to be mentioned) is directed to this mirror, and by reflexion at the surface of the mirror it views a vertical scale (to be mentioned shortly). The height of this mirror above the floor is about $2^{ft.}\ 11^{in.}$. Before the introduction of the photographic methods, the magnet was placed in a perforation of the brass frame midway between its knife-edges. But since the photographic method was introduced, the magnet has been placed excentrically; the distance of its southern face from the nearest end of the southern knife-edge being only $\frac{1}{2}$ inch, and a space of $4\frac{1}{2}$ inches in the northern part of the brass frame being left disposable. In this disposable space there is attached to the brass frame by three clips a concave mirror of speculum-metal, 4 inches in diameter, with its face at right angles to the length of the magnet, used in the photographic system (shortly to be described). Near the north end of the brass frame are fixed in it two-screw stalks, upon which are adjustible screw-weights; one stalk is horizontal, and the movement of its weight affects the position of equilibrium of the magnet (which depends on the equilibrium between the moments of the vertical force of terrestrial magnetism on the one hand and of the magnet's center of gravity on the other hand); the other stalk is vertical, and the movement of its weight affects the delicacy of the balance, and varies the magnitude of its change of position produced by a change in the vertical force of terrestrial magnetism.

The whole is inclosed in a double rectangular box covered with gilt paper, similar to those used for the declination-magnet and the horizontal-force-magnet. This box is based upon the block of wood above mentioned; and in it, in a space separated from the rest by a thin partition, the magnet can vibrate freely in the vertical plane. In the south side of the box is a hole covered by glass, through which pass the rays of light from the scale to the plane mirror, and through which they are reflected from the plane mirror to the telescope. And at the east end is a large hole covered by glass, through which passes the light from the lamp to the concave mirror, and through which it is reflected to the photographic cylinder (to be described hereafter)

The telescope is fixed to a wooden tripod stand, whose feet pass through the floor

without touching it, and are firmly connected with piles driven into the ground. Its position is symmetrical with that of the telescope by which the horizontal-force-magnet is observed; so that a person seated in a position proper for observing the declination-magnet can, by an easy motion of the head right and left, observe the vertical-force and horizontal-force-magnets.

The scale is vertical: it is fixed to the stand which carries the telescope, and is at a very small distance from the object-glass of the telescope. The wire in the field of view of the telescope is horizontal. The telescope being directed towards the mirror, the observer sees in it the divisions of the scale passing upwards and downwards over the fixed wire as the magnet vibrates. The numbers of the scale increase from top to bottom; so that, when the magnet is placed with its marked end towards the East, increasing readings (as seen with the fixed telescope) denote an increasing vertical force.

The vertical-force-magnet, introduced in 1864 and mounted in the new Basement, is 18 inches in length and pointed at the ends.

Observations relating to the permanent Adjustments of the Vertical-Force-magnet.

1. Determination of the compound effect of the declination-magnet, the horizontal-force-magnet, and the iron affixed to the electrometer pole, on the vertical-force-magnet.

The experiments applying to the magnets are given in the volumes for 1840–1841 to 1845: and those applying to the electrometer pole in the volume for 1842. It appears that no sensible disturbance is produced.

2. Determination of the time of vibration of the vertical-force-magnet in the vertical plane.

In the year 1863, vibrations of the vertical-force-magnet were observed on 91 different days, and with readings of various divisions of the scale. The mean times of vibration adopted were, from January to March 21, $15^{s}{\cdot}37$; from March 22 to June 22, $15^{s}{\cdot}05$; and from June 24 to 1864, January 20, $15^{s}{\cdot}52$.

3. Determination of the time of vibration of the vertical-force-magnet in the horizontal plane.

1863, January 5 and 6. The magnet with all its apparatus was suspended from a tripod in the Library, its broad side being in a plane parallel to the horizon; therefore, its moment of inertia was the same as when it is in observation. A telescope, with a wire in its focus, was directed to the reflector carried by the magnet. A scale of numbers was placed on the floor of the Library, at right angles to the long axis of the magnet, or parallel to the mirror. The magnet was observed only at times when it

was swinging through a small arc. From 1450 vibrations, the mean time of one vibration $=24^{s}\cdot131$. This number was used from January to June 23.

The experiments were repeated on 1863, June 23, when the mean of 1200 vibrations gave $23^{s}\cdot717$, and on 1864, January 25 and 26, when the mean of 1000 vibrations gave $23^{s}\cdot806$. The mean of these two numbers, giving weights proportional to the number of observations viz. $23^{s}\cdot758$, was used from 1863, June 24, to 1864, January 20.

4. Computation of the angle through which the magnet moves for a change of one division of the scale; and calculation of the disturbing force producing a movement through one division, in terms of the whole vertical force.

The distance from the scale to the mirror is 151·2 inches, and each division of the scale $=\frac{12}{30\cdot9}$ inches. Hence the angle which one division subtends, as seen from the mirror, is $8'.49''\cdot79$; and therefore the angular movement of the normal to the mirror, corresponding to a change of one division of the scale, is half this quantity, or $4'.24''\cdot90$.

But the angular movement of the normal to the mirror is not the same as the angular movement of the magnet; but is less in the proportion of unity to the cosine of the angle which the normal to the mirror makes with the magnet, or in the proportion of unity to the sine of the angle which the plane of the mirror makes with the magnet. This angle has been found to be 54°: therefore, dividing the result just obtained by sine 54°, we have, for the angular motion of the magnet corresponding to a change of one division of the scale, $5'.27''\cdot43$.

From this, the value, in terms of the whole vertical force, of the disturbing force producing a change of one division, is to be computed by the formula, "Value of Division in terms of radius × cotan. dip × $\frac{T'^2}{T^2}$" where T' is the time of vibration in the horizontal plane, and T the time of vibration in the vertical plane.

From 1863, January to March 21, T' was assumed $= 24^{s}\cdot131$, $T = 15^{s}\cdot37$, dip $= 68°\cdot8'$; from March 22 to June 22, $T' = 24^{s}\cdot131$, $T = 15^{s}\cdot05$, dip $= 68°\cdot6'$; from 1863, June 24 to 1864, January 20, $T' = 23^{s}\cdot758$, $T = 15^{s}\cdot52$, dip $= 68°\cdot5'$. Consequently the change of vertical force (in terms of the whole vertical force) corresponding to a change of one division of the scale, was, from 1863, January to March 21, 0·0015703; from March 22 to June 22, 0·0016405; and from 1863, June 24, to 1864, January 20, 0·0014966. These numbers have been used in the reduction of the observations.

5. Investigation of the temperature-correction of the vertical-force-magnet.

In the Introduction to the Magnetical and Meteorological Observations for 1847 are given the details of observations for the effect of temperature on the vertical-force-magnet, made in the same way as those for the horizontal-force-magnet described

above. The results for the thermometrical correction at temperature t° of Fahrenheit, in terms of the whole vertical force, are—

With marked end of magnet West—

$$0{\cdot}00012652 \times (t-32) + 0{\cdot}000001619 \times (t-32)^2;$$

and with marked end East—

$$0{\cdot}00018979 \times (t-32) + 0{\cdot}000000726 \times (t-32)^2;$$

the mean being—

$$0{\cdot}00015816 \times (t-32) + 0{\cdot}000001172 \times (t-32)^2;$$

A table of the last quantity has been formed, and has been used in the "Reduction of the Observations from 1848 to 1857," attached to the Observations for 1859, and in the "Reductions on days of Great Magnetic Disturbance 1841–1857," attached to the volume for 1862.

It is proper to state that observations made in the year 1864, on the change of magnetic power produced when the magnet is heated by hot air, give a much larger value to the principal coefficient of the formula.

The method of observing with the vertical-force-magnet is the following:—

A fine horizontal wire is fixed in the field of view of the telescope, which is directed to the small plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed vertical scale are seen; and during the oscillations of the magnet, the divisions of the scale are seen to pass alternately upwards and downwards across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the other two magnets. The observer applies his eye to the telescope about two vibrations before the arranged time, and if the magnet is in motion he observes its places at four extreme vibrations; and the mean of these is taken as for the horizontal-force-magnet. But if the magnet is at rest, then at one-half time of vibration before the arranged time, and at an equal interval after the arranged time, the division of the scale is noted; if there is a slight difference, the mean is taken.

The number of instances in 1863 in which the magnet was found in a state of vibration is very small.

Within the double box is suspended a thermometer, which is read at every hour of observation, and also, on one day of every week, at the hours 18^h, 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, 6^h, 9^h, and 12^h, in the same manner as that of the horizontal-force-instrument.

From 1863, June, a maximum and a minimum thermometer were attached to the outside of the box, and were read twice daily; the absolute maximum and absolute minimum derived from these are printed, as well as the thermometer readings above-mentioned, in the same manner as those for the horizontal force.

§ 7. *Photographic self-registering Apparatus for Continuous Record of Magnetic Vertical Force.*

The concave mirror which is carried by the vertical-force-magnet has been described in the last article. At the distance of about 22 inches from that mirror, and external to the box, is the horizontal aperture, about $0^{in}{\cdot}3$ in length and $0^{in}{\cdot}01$ in breadth, carried by the same block which carries the supports of the agate plates. The lamp which shines through this aperture was originally carried by the same block; but the numerous disturbances shown in the photographic trace at the times of changing the lamp suggested the propriety of supporting it upon a different foundation; and since 1849, February, it has been carried by another wooden pier, of such a form as to admit of the lamp being placed very nearly in contact with the aperture-plate. The light reflected from the mirror passes through a cylindrical lens with its axis vertical, very near to the cylinder carrying the photographic paper, and finally forms a well-defined spot of light on the cylinder of paper, at the distance of 8·3 feet from the mirror. As the movements of the magnet are vertical, the axis of the cylinder is vertical. The cylinder is about $15\frac{1}{2}$ inches in circumference, or somewhat larger than that used for the declination and horizontal-force magnets. The forms of the exterior and interior cylinders, and the method of mounting the paper, are in all respects the same as for the declination and horizontal-force magnets; but the cylinder is supported by being merely planted upon a circular horizontal plate (its position being defined by fitting a central hole in the metallic cap of the cylinder upon a central pin in the plate), which is turned by watchwork once in twenty-four hours. The trace of the vertical-force-magnet is on the west side of the cylinder.

On the east side, the cylinder receives the trace produced by the barometer (to be described hereafter). A pencil of light from the lamp which is used for the barometer shines through a fixed aperture with a small cylindrical lens, for tracing a photographic base-line upon the cylinder of paper, similar to that for the cylinder of the declination and horizontal-force magnets.

The scale for the ordinates of the photographic curve of the vertical force is thus computed. Remarking that the radius which determines the range of the motion of the spot of light is double the distance 8·3 feet, and is therefore = 199·2 inches, the formula used in the last section, when applied to $\frac{\text{disturbing force}}{\text{whole vertical force}} = 0{\cdot}01$, gives value of division $= 199{\cdot}2 \times \text{tan. dip.} \times \left(\frac{T}{T'}\right)^2 \times 0{\cdot}01$. From 1863, January to March 21, dip. = 68°·8; $T' = 24{\cdot}131$, $T = 15{\cdot}37$. From March 22 to June 22, the values are 68°6′, 24·131, 15·05. From June 24 to 1864, January 20, they are 68°·5′, 23·758, 15·52. The corresponding scale-measures for $\frac{\text{disturbing force}}{\text{whole vertical force}} = 0{\cdot}01$ are 2·0137, 1·9275, 2·1128 inches. With these values, the pasteboard scales have been prepared.

§ 8. *Dipping Needles, and Method of observing the Magnetic Dip.*

For the construction, fittings, and use of Robinson's dip instrument, as well as for the immediate results of observations of dips, and for some unsatisfactory points in the results, I refer to the printed observations from 1843 to 1862, especially that last-mentioned.

With the view of removing all causes of possible error of observation which we can fully understand and control, I furnished Mr. Simms with plans for a new instrument, which, for distinction, is subsequently called Airy's instrument. The following description will probably suffice to convey an idea of its peculiarities :—

The form of the needles, the form of their axes, the form of the agate bearings, and the general arrangement of the relieving apparatus, are precisely the same as those in Robinson's and other needles. But the form of the observing apparatus is greatly modified, in order to secure the following objects :—

I. To obtain a microscopic view of the points of the needles, as in the instruments introduced by Dr. Lloyd and Major-General Sabine.

II. To possess at the same time the means of observing the needles while in a state of vibration.

III. To have the means of observing needles of different lengths.

IV. To give an illumination to the field of view of each microscope, directed from the side opposite to the observer's eye, so that the light may enter past the point of the needle into the object glass of the microscope, forming a black image of the needle-point in a bright field of view.

V. To give facility for observing by day or night.

With these views, the following form is given to the apparatus :—

The needle, and the bodies of the microscopes, are inclosed in a square box. The base of the box, two vertical sides, and the top, are made of gun-metal (carefully selected to insure its freedom from iron); but the sides parallel to the plane of vibration of the needle are of glass. Of the two glass sides, that which is next the observer is firmly fixed; it is hereafter called "the graduated glass-plate." The other glass side can be withdrawn, to open the box, for inserting the needle, &c.

An axis, whose length is perpendicular to the plane of vibration of the needles, and is as nearly as possible in the line of the axis of the needle, supported on two bearings (of which one is cemented in a hole in the graduated glass-plate, the other being upon a horizontal bar near to the agate support of the needle-axis), carries a transverse arm, about 11 inches long, or rather two arms, projecting about $5\frac{1}{2}$ inches on each side of the axis. Each of these projecting arms has a long opening, or slot, about 1 inch wide, extending from the neighbourhood of the center-work nearly to the end of the arm. Through this opening the tube of a microscope passes, in a direction parallel to the axis of the needle, and is firmly fixed by a shoulder-bearing on one side of the

arm, and a circular nut, working in a thread cut upon the microscope-tube, on the other side of the arm. The microscope can thus be fixed at any distance from the central axis, within the limits of the length of the projecting arm. In 1863, between February 24 and May 11, the slot for a single moveable microscope on each side was changed for three fixed microscopes on each side, adapted in position to the lengths of the needles to be mentioned shortly.

The microscope-tube thus carried is not the entire microscope, but so much as contains the object-glass and the field-glass. Upon the plane side of the field-glass (which is turned towards the object-glass), a series of parallel lines is engraved by etching with fluoric acid. The object-glass is so adjusted that the image of the needle-point is formed upon the plane side of the field-glass; and thus the parallel lines can be used for observing the needle in a state of vibration; and, one of them being adopted as standard, the lines can be used for reference to the graduated circle (to be mentioned). All this requires that there be an eye-glass also for the microscope.

The axis of which we have spoken is continued through the graduated glass-plate, and there it carries another transverse arm parallel to the former, and generally similar to it. In each part of this slides a short eye-piece, carrying the eye-glass. In 1863, at the time mentioned above, the slotted arm and moveable eye-socket were changed for an arm with three sockets. Thus, reckoning from the observer's eye there are the following parts:—

(1.) The eye-glass.

(2.) The graduated glass-plate (its graduations, however, not intervening in this part of the glass, the graduated circle being so large as to include all the microscopes).

(3.) The field-glass, on the further surface of which the parallel lines are engraved.

(4.) The object-glass.

(5.) The needle.

(6.) The removeable glass side of the box.

(7.) The illuminating reflector, to be described hereafter.

The optical part of the apparatus being thus described, we may proceed to speak of the graduated circle.

The graduations of the circle (whose diameter is about $9\frac{3}{4}$ inches) are etched on the inner surface of the graduated glass-plate. These divisions (as well as the parallel lines on the field glasses of the microscopes) are beautifully neat and regular, and are, I think, superior to any that I have seen on metal. The same piece of metal which carries the transverse arms supporting the microscope bodies carries also two arms with verniers for reading their graduations. These verniers (being adapted to transmitted light) are thin plates of metal, with notches instead of lines. The reading of the verniers is very easy. The portion of the axis which is external to the graduated glass-plate (towards the observer), and which has there, as already stated, two arms for carrying the microscope eye-glasses, has also two arms for carrying the lenses by

which the verniers and glass-plate graduations are viewed. These four arms are the radii of a circle, which can be fixed in position by a clamp, attached to the gun-metal casing of the graduated glass-plate, and furnished with the usual slow-motion screw.

The entire system of the two arms carrying the microscope-bodies, the two arms carrying the microscope eye-glasses, the two arms carrying the verniers, and the two arms carrying the reading-glasses for the verniers, is turned rapidly by means of a button on the external side of the graduated glass-plate, or is moved slowly by means of the slow-motion screw just mentioned.

It now remains only to describe the illuminating apparatus. On the outside of the removeable glass plate, there are supports for the axis of a metallic circle turning in a plane parallel to the plane of needle-vibration. This circle has four slotted radii, and in these slots or openings there slide small frames carrying prismatic glass reflectors, each of which can turn on an axis, in the plane of the circle, but transverse to the radius. Two of these reflectors are for the purpose of sending light through the verniers, and therefore are fixed in radial distance; the other two are for sending light past the ends of the needle through the microscopes, and therefore require adjustment on change of needle and corresponding change of position of microscopes. These have now been changed for fixed reflectors, corresponding to the fixed microscopes. The circle can be turned by a small winch near the observer's hand. At present, the winch is removed, as its axis was found to be slightly magnetic. At each observation, it is necessary to turn the circle which carries the reflectors; but this is the work of an instant.

The light which illuminates the whole is a gas-burner, in the line of the axis of rotation. Its rays fall upon the glass prisms, and each of these is adjusted, by turning on its axis, to throw the reflected light in the required direction.

The whole of the apparatus, as thus described, is planted upon a horizontal plate admitting of rotation in azimuth: the plate is graduated in azimuth, and verniers are fixed to the gun-metal tripod stand. The gas-pipe is led down the central vertical axis, and there communicates by a rotatory joint with the fixed gas-pipes.

The needles which are used with this instrument are—

B_1, a plain needle	each 9 inches ong.
B_2, a plain needle	
B_3, a loaded needle with adjustible load	
B_4, a needle whose plane passes through the axis of the needle	
C_1, a plain needle	each 6 inches long.
C_2, a plain needle	
C_3, a loaded needle with adjustible load	
C_4, a needle whose plane passes through the axis of the needle	
D_1, a plain needle	each 3 inches long.
D_2, a plain needle	
D_3, a loaded needle with adjustible load	
D_4, a needle whose plane passes through the axis of the needle	

It is believed that the results of the observations with this instrument are somewhat but not very greatly, more consistent than those with the old instrument. The advantage gained appears to arise from the greater certainty of readings of graduations, and from the greater facility of repeating observations whose means are adopted for use.

Many discordances have been removed by regrinding the agate edges on which the needle-axes turn, in the year 1864.

§ 9. *Observations for the absolute Measure of the Horizontal Force of Terrestrial Magnetism.*

The apparatus with which these observations were made from 1845 to 1862, February, is the same which was used in the investigation of corrections of horizontal-force-magnet and vertical-force-magnet for temperature. A description of it will be found in the Introduction to the Greenwich Magnetic Observations, 1862. It is unnecessary here to allude further to it than to remark that it appears, from the comparison of nearly simultaneous observations of the old apparatus and the Kew instrument (now in use) exhibited in the Introduction 1862, pages xxxviii and xxxix, that to make the old and the new series comparable, the results of the old series ought to be diminished by $\frac{1}{117}$ part.

In the spring of 1861, the Unifilar Instrument, similar in all respects (as is understood) to those used in and issued by the Kew Observatory, was procured by the courteous application of Major-General Sabine, from the makers, Messrs. J. T. Gibson and Son; and after having been subjected to the usual examinations, at the Kew Observatory, for determination of its constants (for which I am indebted to the kindness of Balfour Stewart, Esq.), was mounted at the Royal Observatory. Observations with this instrument commenced on 1861, June 11, and were continued through the year; and, after some slight modifications of its verniers, it is still maintained in use (1864).

The deflected magnet (whose use is merely to ascertain the proportion which the power of the deflecting magnet at a given distance bears to the power of terrestrial magnetism) is 3 inches long, carrying a small plane mirror. The deflecting magnet is 4 inches long; it is a hollow cylinder, carrying in its internal tube a collimator, by means of which its time of vibration is observed in another apparatus. The frame which supports the suspension-piece of the deflected magnet carries also the telescope directed to the magnet-mirror; it rotates round the vertical axis of a horizontal graduated circle whose external diameter is 10 inches. The deflecting magnet is always used with its end towards the deflected magnet. In the reduction of the observations, the precepts contained in the Skeleton Form prepared by the Kew Observatory have received the strictest attention.

The following is the explanation of the method of reduction.

The distance of the centers of the deflected and deflecting magnet being r_0, it is supposed (from observations made at Kew, of which the details have not reached me) that the magnetism of the deflecting magnet is so altered by induction that the following multipliers ought to be used in computing the Absolute Force:—

At distance 1·0 foot, factor is	1·00031
1·1	1·00023
1·2	1·00018
1·3	1·00014
1·4	1·00011
1·5	1·00009

The correction of the magnetic power for temperature t_0 of Fahrenheit, reducing all to 35° of Fahrenheit, is

$$0\cdot00013126\,(t_0-35)+0\cdot0000025\,(t_0-35)^2$$

A_1 is $\frac{1}{2}$(distance)^3 × sine deflection, corrected by the two last-mentioned quantities, for distance 1 foot; A_2 is the similar expression for distance 1·3 foot; A'_2 is $\frac{A_2}{(1\cdot3)^2}$; P is $\frac{A_1-A_2}{A_1-A'_2}$. A mean value of P is adopted from various observations; then $\frac{m}{X}=A_1\times\left(1-\frac{P}{1}\right)$ for smaller distance, or $=A_2\times\left(1-\frac{P}{1\cdot69}\right)$ for larger distance. The mean of these is usually adopted for the true value of $\frac{m}{X}$.

For computing the value of mX from observed vibrations, it is necessary to know K, the moment of inertia of the magnet as mounted. The value of log. π^2K furnished by Mr. Stewart is 1·66073 at temperature 30° and 1·66109 at temperature 90°. Then, putting T for the time of the magnet's vibration as corrected for induction, temperature, and torsion-force, the value of mX is $=\frac{\pi^2K}{T^2}$. From the combination of this value of mX with the former value of $\frac{m}{X}$, m and X are immediately found.

The computation of the values of m and X has, to the year 1857, been made in reference to English measure only, using the foot and the grain as the units of length and weight; but, for comparison with foreign observations of the Absolute Intensity of Magnetism, it is desirable that X should be expressed also in reference to French measure, in terms of the millimètre and milligramme. If an English foot be supposed equal to α times the millimètre, and a grain be equal to β times the milligramme, then it is seen that, for the reduction of $\frac{m}{X}$ and mX to French measure, these must be multiplied by α^3 and $\alpha^2\beta$ respectively. Hence X^2 must be multiplied by $\frac{\beta}{\alpha}$, and X by $\sqrt{\frac{\beta}{\alpha}}$. Assuming that the mètre is equal to 39·37079 inches, and the gramme equal to 15·43249 grains, log. $\sqrt{\frac{\beta}{\alpha}}$ will be found to be $=9\cdot6637805$, and the factor for reducing the English values of X to French values will be 0·46108 or $\frac{1}{2\cdot1689}$. The

values of X in French measure thus derived from those in English measure are given in the proper table.

§ 10. *Explanation of the Tables of Indications of the Magnetometers.*

The Indications are derived entirely from the measures of the ordinates of the Photographic Curves, except in a few instances in which the results are marked with an asterisk, in which case the results are those given by eye-observations, usually because the photographic process has failed.

Telescope-observations of the Magnetometers have usually been made four times every day, except on Sundays, on which days two or three observations only have been taken; but, though these observations are employed in forming the base lines on the photographic sheets, their immediate results are not necessarily given in the Tables.

For each photographic record, a new base-line, representing a convenient reading in round numbers of the element to which it applies, has been drawn on the sheet. Then the Assistant, who is charged with the translation of the curve-ordinates into numbers, remarks the salient points of the curve, or the points which if connected by straight lines would produce a polygon not sensibly differing from the photographic curve; to each of these he applies the pasteboard scale proper for the element under consideration; the base of the pasteboard scale determines the time on the time-scale, and the reading of the pasteboard scale for the point of the photographic curve gives the quantity which is to be added to the value for the new base-line. The ordinate-reading so formed is printed without alteration in the Tables. It is particularly to be remarked that the indications for horizontal force and vertical force are *not corrected for temperature*.

In measuring the ordinates of the Vertical Force Curves, the same difficulty that is mentioned in preceding volumes has still occasionally been felt. Apparently without cause, the curve is dislocated; one part being raised above or depressed below the contiguous part, in the direction of the ordinate, usually by small quantities. In all cases the displacement is accompanied by vibration, the original position being at the extremity of the arc of vibration, and the new position being at its center; showing that there has been no want of delicacy in the movement, and that the change is precisely the same as would be caused by the quiet application of a small weight upon one end of the magnet.

In translating the ordinates into numbers on these occasions, two ordinates have been taken for the same abscissa; these are connected, in the printed Indications, by a brace, and the difference of the numbers indicates the amount of the disturbance.

§ 11. *Standard Barometer.*

The Barometer is a standard, by Newman, mounted in 1840. It is fixed on the South wall of the west arm of the Magnetic Observatory. The graduated scale which measures the height of the mercury is made of brass, and to it is affixed a brass rod, passing down the inside of one of the upright supports, and terminating in a conical point of ivory; this point in observation is made just to touch the surface of the mercury in the cistern, and the contact is easily seen by the reflected and the actual point appearing *just* to meet each other. The rod and scale are made to slide up and down by means of a slow-motion screw. The scale is divided to $0^{in.}05$.

The vernier subdivides the scale divisions to $0^{in.}002$; it is moved by a slow-motion screw, and in observation is adjusted so that the ray of light passing under the back and front of the semi-cylindrical plate carried by the vernier, is a tangent to the highest part of the convex surface of the mercury in the tube.

The tube is $0^{in.}565$ in diameter; the correction for the effect of capillary attraction is therefore only $+ 0^{in.}002$. The cistern is of glass.

At the bottom of the instrument are three screws, turning in the fixed part of the support, and acting on the piece in which the lower pivot of the barometer-frame turns, for adjustment to verticality: this adjustment is examined weekly.

The readings of this barometer are considered to be coincident with those of the Royal Society's flint-glass standard barometer.

All observations of this barometer have been corrected for the difference of temperature of the mercury in the tube at the time of observation from 32°, by the application of the corrections contained in the table for barometers whose scales are engraved upon a rod of brass reaching from the level of the mercury to the vernier. (See the report of the Committee of Physics and Meteorology approved by the Royal Society.)

No correction is required for the difference of capacities of the tube and the cistern; for, as the mercury rises or falls in the cistern by the falling or rising of the mercury in the tube, so the termination of the scale is adjusted to the surface of the mercury in the cistern, and the distance between the surfaces of the mercury in the cistern and the tube is at once measured.

The height of the cistern above the mean level of the sea is 159 feet. This element is founded upon the determination of Mr. Lloyd, in the *Phil. Trans.*, 1831; the elevation of the cistern above the brass piece inserted in a stone in the transit-room (to which Mr. Lloyd refers) being $5^{ft.}2^{in.}$.

The barometer has been read at 21^h, 0^h, 3^h, 9^h (astronomical), on every day, excepting on Sundays, and on Good Friday and Christmas Day, on which days fewer observations have been taken. Every reading has been reduced to the reading which would have been obtained at the temperature 32° of the mercury and scale, by application of the correction given in Table II. (pages 82 to 87) of the Report of the Committee

of Physics of the Royal Society, The mean of the reduced readings has then been taken for each civil day, and finally converted into mean daily reading, by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions* 1848, Part I.

In the printed record of the barometrical and all other meteorological observations, the day is to be understood, generally, as defined in civil reckoning.

§ 12. *Photographic self-registering Apparatus for continuous Record of the readings of the Barometer.*

In the description of the Photographic self-registering Apparatus for continuous Record of Magnetic Vertical Force, the vertical cylinder covered with photographic paper and revolving in 24 hours is described. North of the surface of this cylinder, at the distance of about 30 inches, is a large syphon barometer, the bore of the upper and lower extremities of its arms being about 1·1 inch. A glass float in the quicksilver of the lower extremity is partially supported by a counterpoise acting on a light lever (which turns on delicate pivots), so that the wire supporting the float is constantly stretched, leaving a definite part of the weight of the float to be supported by the quicksilver. This lever is lengthened to carry a vertical plate of opaque mica with a small aperture, whose distance from the fulcrum is eight times the distance of the point of attachment of the float wire, and whose movement, therefore, is four times the movement of the column of a cistern-barometer. Through this hole the light of a lamp, collected by a cylindrical lens, shines upon the photographic paper.

The scale of time is established by means of occasional interruptions of the light, and the scale of measure is established by comparison with ocasional eye-observations, exactly as for the photographic registers of the magnetometers.

This barometer was brought into use in 1848, but its indications were not satisfactory till the mercury was boiled in the tube by Messrs. Negretti and Zambra on 1853, August 18, since which time they have appeared unexceptionable. Results of the indications are printed in the *Maxima and Minima of the Barometer*, near the end of the Meteorological Results.

§ 13. *Thermometers for ordinary Observation of the Temperature of the Air and Evaporation.*

The Dry-Bulb Thermometer, the Wet-Bulb Thermometer, the Maximum Self-Registering Thermometers, both dry and wet, and the Minimum Self-Registering Thermometers, dry and wet, all for determination of the temperature of the air and of evaporation, are mounted on a revolving frame whose fixed vertical axis is planted in the ground. From the year 1846 to 1863 the post forming the vertical axis was about 23 feet south (magnetic) of the S.S.E. angle of the south arm of the Magnetic

Observatory; in 1863 it was moved to a position about 35 feet south (astronomical) of the south angle. A frame revolves on this post, consisting of a horizontal board as base, of a vertical board projecting upwards from it connected with one edge of the horizontal board, and of two parallel inclined boards (separated about three inches) connected at the top with the vertical board, and at the bottom with the other edge of the horizontal board. The outer inclined board is covered with zinc. The air passes freely between all these boards.

The dry and wet-bulb thermometers are attached to the outside, and near the center of the vertical board; the maximum and minimum thermometers for air towards one vertical edge, and those for evaporation towards the other vertical edge, with their bulbs at almost the same level, and near to those of the dry and wet-bulb thermometers; their bulbs are about 4 feet above the ground and projecting from 2 inches to 3 inches below the horizontal board. Above the thermometers is a small projecting roof to protect them from rain. The frame is always turned with the inclined side towards the sun. It is presumed that the thermometers are thus sufficiently protected.

The graduations of all the thermometers used in the Royal Observatory rest fundamentally upon those of a Standard Thermometer, the property of Mr. Glaisher, which derives its authority from comparison with original thermometers constructed by the late Rev. R. Sheepshanks about the years 1840–1843, in the course of his preparations for the construction of the National Standard of Length. The whole of the radical determinations of Freezing Point, Boiling Point, and Subdivision of Volume of Tube, were made by Mr. Sheepshanks with the utmost care: it is believed that these were the first original thermometers that had been constructed in England for many years. Mr. Glaisher's thermometer has been used as the standard of reference for all the thermometers used in the Royal Observatory since 1840.

The Dry-Bulb Thermometer is by Newman. The corrections required for its readings, as found by comparison with the standard above-mentioned, are as follows:—

Below	32°	subtract 0°·5
Between 32 and	43°	0·6
44 and	47	0·7
48 and	56	0·9
57 and	61	1·1
62 and	74	1·3
75 and	80	1·5
81 and	86	1·8
87 and	95	2·0
96 and	100	2·2

The Wet-Bulb Thermometer is by Negretti and Zambra. Its bulb is of the same size as that of the Dry-Bulb Thermometer. A piece of muslin is wrapped round the bulb, and a skein of cotton is led from it into a cup of rain-water, by which it is maintained in a state of moisture. In frosty weather the muslin is moistened some time before each observation. The corrections which the readings of this thermometer are found to require are as follows:

Below	32°	subtract 0°.4
Between	32° and 36°	0°.3
	37 and 40	0°.2
	41 and 55	0°.1
	56 and 75	0°.0
Above	75	add 0.1

The eye-readings of the dry-bulb and wet-bulb thermometers have usually been taken at the hours (astronomical reckoning) 21^h, 0^h, 3^h, 9^h, and corrected by application of the numbers given above; then their mean has been taken, and a correction applied, in order to obtain the true diurnal mean. This correction is derived from the numbers in Mr. Glaisher's paper in the Philosophical Transactions for 1848.

The dew-point has been inferred exclusively from the simultaneous observations of the dry-bulb and wet-bulb thermometers, by multiplying the difference between the readings of these thermometers by a factor peculiar to the temperature of the air, and subtracting the product from the reading of the dry-bulb thermometer. These factors have been found by Mr. Glaisher from the comparison of a great number of dew-point determinations, obtained by use of Daniell's hygrometer, with simultaneous observations of dry-bulb and wet-bulb thermometers. The first part of this investigation was published in full, in the volume for 1844, pages 67–72; it was based upon all the observations made up to that time. Subsequently, the comparison was extended to include all the simultaneous observations of these instruments made at the Royal Observatory, Greenwich, from 1841 to 1854, with some observations taken at high temperatures in India, and others at low and medium temperatures at Toronto. The results at the same temperature were found to be the same at these different localities, so far as the climatic circumstances permitted comparison. (See Glaisher's Hygrometrical Tables, 3rd Edition). The following table exhibits the result of the entire comparison; it has been used in forming the dew-points in the present volume.

Table of Factors by which the Difference of Readings of the Dry-Bulb and Wet-Bulb Thermometers is to be Multiplied in order to produce the Difference between the Readings of the Dry-Bulb and Dew-Point Thermometers.

Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.
°		°		°		°	
10	8·78	33	3·01	56	1·94	79	1·69
11	8·78	34	2·77	57	1·92	80	1·68
12	8·78	35	2·60	58	1·90	81	1·68
13	8·77	36	2·50	59	1·89	82	1·67
14	8·76	37	2·42	60	1·88	83	1·67
15	8·75	38	2·36	61	1·87	84	1·66
16	8·70	39	2·32	62	1·86	85	1·65
17	8·62	40	2·29	63	1·85	86	1·65
18	8·50	41	2·26	64	1·83	87	1·64
19	8·34	42	2·23	65	1·82	88	1·64
20	8·14	43	2·20	66	1·81	89	1·63
21	7·88	44	2·18	67	1·80	90	1·63
22	7·60	45	2·16	68	1·79	91	1·62
23	7·28	46	2·14	69	1·78	92	1·62
24	6·92	47	2·12	70	1·77	93	1·61
25	6·53	48	2·10	71	1·76	94	1·60
26	6·08	49	2·08	72	1·75	95	1·60
27	5·61	50	2·06	73	1·74	96	1·59
28	5·12	51	2·04	74	1·73	97	1·59
29	4·63	52	2·02	75	1·72	98	1·58
30	4·15	53	2·00	76	1·71	99	1·58
31	3·70	54	1·98	77	1·70	100	1·57
32	3·32	55	1·96	78	1·69		

The maximum self-registering thermometer is a mercurial thermometer, of the construction invented by Messrs. Negretti and Zambra. There is a small detached piece of glass in the tube, just above a bent part of the tube (near the bulb), through which the piece of glass cannot pass down. The column of mercury in rising lifts the glass up and passes freely; but in descending it is unable to pass the glass, and the lower mass of mercury descends, leaving a vacant space below the glass, and leaving a portion of the mercury above it. The piece of glass operates as an efficient valve. The graduation of this thermometer is sensibly correct. There is a similar thermometer for the maximum wet-bulb reading; its readings are too high by 0°·4.

The minimum self-registering thermometer is an alcohol thermometer, of the construction known as Rutherford's. A sliding glass index allows the alcohol in rising to pass above it, but is drawn down by the peculiar action of the upper surface of the fluid when it sinks. The readings of that which gives the minimum temperature of the air require an additive correction 0°·5; those of the minimum wet-bulb temperature require corrections varying from +2°·2 at 24° to −0°·2 at 71°.

The numbers in the printed columns of Mean Daily Value of Dry Thermometer are found by combining two numbers derived from different sources. One is the corrected mean of four observations taken in the day, as is described above. The

other is the mean of the maximum and minimum corrected by a small quantity depending on the month, given in Mr. Glaisher's paper. The adopted mean temperature is the mean of those two numbers, weights being given proportional to the number of observations from which they are derived.

For the Mean Daily value of Dew Point, the dew-point is found from the observations at 21^h, 0^h, 3^h, 9^h, in the manner above described, and by use of the table of factors given above, and the mean of these dew-points is corrected by a number given in the paper in the Philosophical Transactions 1848.

§ 14. *Photographic self-registering Apparatus for continuous Record of the Readings of the Dry-Bulb and Wet-Bulb Thermometers.*

About 28 feet south (magnetic) of the south-east angle of the south arm of the Magnetic Observatory, and about 25 feet east of the thermometers for eye-observations, is a shed 10 feet square, standing upon posts 9 feet high, under which are placed the photographic thermometers, the dry-bulb thermometer towards the east, and the wet-bulb thermometer towards the west. The bulbs of the thermometers are eight inches in length, and 0·4 inch internal bore, and their centers are about 4 feet above the ground. The bulb of one of the thermometers is covered with muslin throughout its whole length, which is kept moist by means of capillary passage of water along cotton wicks leading to a vessel filled with water.

There are small adjustments admitting the raising or dropping of the thermometers, so that the register of their changing readings may be on a convenient part of the paper. The thermometer frames are covered by plates having longitudinal apertures, so narrow, that any light which may pass through them is completely, or almost completely, intercepted by the broad flat column of mercury in the thermometer-tube. Across these plates a fine wire is placed at every degree; and at the decades of the degrees, and also at 32°, 52°, and 72°, a coarser wire is placed. A gas lamp is placed about 9 inches from each thermometer (east of the dry bulb and west of the wet bulb), and its light, condensed by a cylindrical lens, whose axis is vertical, shines through the thermometer-tube above the surface of the mercury, and forms a well-defined line of light upon the photographic paper, which is wrapped around the cylinder. As the cylinder revolves under this light, it receives a broad sheet of photographic trace, whose breadth (in the direction of the axis of the cylinder) varies with the varying height of the mercury in the thermometer-tube. The light in its passage is intercepted by the wires placed across the tube at every degree, and there are, therefore, left upon the paper corresponding lines in which there is no photogenic action.

The cylinder revolves in 48 hours; the daily photographic traces of the two thermometers are thus simultaneously registered on opposite sides of the cylinder without intermixing. The length of the cylinder is $13\frac{1}{2}$ inches, and its circumference is 19 inches.

§ 15. *Thermometers for Solar Radiation and Radiation to the Sky.*

The thermometer for Solar Radiation is placed in an open box about 10 feet south of the south-west angle of the south arm of the Magnetic Observatory. The box is about 13 inches high; the bulb of the thermometer is about 10 inches above the bottom of the box, fully exposed to the sun's rays.

The thermometer is a self-registering maximum mercurial thermometer of Negretti and Zambra's construction; its bulb is blackened, and enclosed in a glass sphere from which the air has been exhausted. Its graduations are correct, and the numbers inserted in the tables are those read from the instrument without alteration. The thermometer is read at 9^h a.m., noon, 3^h p.m., and occasionally at 9^h p.m.; the highest of these readings is adopted as the maximum for the day.

Near to this thermometer, within the same box, and at the same height, is placed a thermometer with blackened bulb, which is not enclosed in an exhausted sphere. An instrument of this form and in this position was exclusively used to the year 1859. Simultaneous readings of both instruments are now taken, with the view of rendering the series of observations which terminated in 1859 (made with exposed bulb) comparable with that which commenced in 1859, and is still continued (made with bulb inclosed in an exhausted sphere).

The thermometer for radiation to the sky is placed about 12 feet west of the Solar Radiation thermometer, with its bulb resting on short grass, and fully exposed to the sky. It is a self-registering minimum spirit thermometer of Rutherford's construction, made by Negretti and Zambra. Its graduation is correct, and the numbers inserted in the table are those read from the scale without alteration. It is read every day at 9^h a.m., and occasionally at 9^h p.m.

This thermometer was out of order on February 9, 13, 16, April 28, May 6, 19, 22, 29, June 19, July 1, 4, 17, August 26, September 7, and December 31.

§ 16. *Thermometers sunk below the Surface of the Soil at different Depths.*

These thermometers were made by Messrs. Adie of Edinburgh, under the immediate superintendence of Professor (now Principal) J. D. Forbes. The graduation was made by Professor Forbes himself.

The thermometers are four in number. They are all placed in one hole in the ground, the diameter of which in its upper half is 1 foot, and in its lower half about 6 inches. Each thermometer is attached in its whole length to a slender piece of wood, which is planted in the hole with it. The place of the hole is 20 feet south of the extremity of the south arm of the Magnetic Observatory, and opposite the center of its south front.

The soil consisted of beds of sand; of flint-gravel with a large proportion of sand; and of flints with a small proportion of sand, cemented almost to the consistency of pudding-stone. Every part of the gravel and sand extracted from the hole was perfectly dry.

The bulbs of the thermometers are cylindrical, 10 or 12 inches long and 2 or 3 inches in diameter. The bore of the principal part of the tubes, from the bulb to the graduated scale, is very small. In that part to which the scale is attached, the tube is larger.

The thermometer No. 1 was dropped into the hole to such a depth that the center of its bulb was 24 French feet (25·6 English feet) below the surface: then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the center of its bulb was 12 French feet below the surface; No. 3 and No. 4 till the centers of their bulbs were respectively 6 and 3 French feet below the surface; and the hole was then completely filled with dry sand. The upper parts of the tubes, carying the scales, were left projecting above the surface: No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, the parts 8·5, 10·0, 11·0, and 14·5 inches, respectively are tube with narrow bore.

The projecting parts of the tubes are protected by a wooden case or box fixed to the ground; the sides of the box are perforated with numerous holes, and it has a double roof. In the North face of this box is a large plate of glass through which the thermometers are read. Within the box are two smaller thermometers one (No. 5) whose bulb is sunk one inch in the ground, and one (No. 6) whose bulb is in the free air nearly in the center of the box.

The fluid of the four long thermometers is alcohol tinged with a red colour.

The values of 1° on the scales of Nos. 1, 2, 3 and 4, are respectively $2^{in.}$, $1^{in.}1$, $0^{in.}9$, and $0^{in.}55$; and the ranges of the scales, as first mounted, were, 43°·0 to 57°·7, 42°·0 to 56°·8, 39°·0 to 57°·5, and 34°·2 to 64°·5.

These ranges for Nos. 2, 3, and 4, were found to be insufficient in some years, particularly those of Nos. 3 and 4, or the thermometers sunk to the depth of 6 feet and 3 feet.

In 1857, June 22, Messrs. Negretti and Zambra removed from Nos. 3 and 4 a quantity of fluid corresponding to the extent of 5° on their scales, and the scales of these two thermometers were lowered by that linear extent, making the readings the same as before.

In subsequent years it was found that the amount of fluid removed was somewhat too great, for now at the lower end of the scale the 6-foot thermometer sometimes falls below the limit of its scale or $43\frac{1}{2}°$; and the 3-foot thermometer below 39°·7; in which cases the alcohol sinks into the capillary tube.

The readings at the early part of the series were at times defective at high tempera-

tures, but always complete at low temperatures; now, they are always complete at high temperatures, and are at times defective at low temperatures. The two combined however, will enable us to complete all readings.

These thermometers are read once a day, at noon, and the readings appear in the printed volumes as read from their scales without correction.

§ 17. *Thermometers immersed in the Water of the Thames.*

The self-registering maximum and minimum thermometers for determining the highest and lowest temperatures of the water of the Thames are by Messrs. Negretti and Zambra, and are observed every day at 10 a. m.

A strong wooden trunk is firmly fixed to the side of the Dreadnought Hospital Ship, about 5 feet in length, and closed at the bottom; the bottom and the sides, to the height of 3 feet, are perforated with a great number of holes, so that the water can easily flow through; the thermometers are suspended within this trunk so as to be about 2 feet below the surface of the water, and 1 foot from the bottom of the trunk.

The regular observations are made under the superintendence of the Medical Officers of the Ship.

These thermometers were out of order on August 7 and 8.

§ 18. *Osler's Anemometer.*

This anemometer is self-registering: it was made by Newman, but has received several changes since it was originally constructed. A large vane, which is turned by the wind, and from which a vertical spindle proceeds down nearly to the table in the north-western turret of the ancient part of the Observatory, gives motion by a pinion upon the spindle to a rackwork carrying a pencil. This pencil makes a mark upon a paper affixed to a board which is moved uniformly in a direction transverse to the direction of the rack-motion. The movement of the board is effected by means of a rack connected with the pinion of a clock. The paper has lines printed upon it corresponding to the positions which the pencil must take when the direction of the vane is N., E., S., or W.; and also has transversal lines corresponding to the positions of the pencil at every hour. The first adjustment for azimuth was obtained by observing from a certain point the time of passage of a star behind the vane-shaft, and computing from that observation the azimuth; then on a calm day drawing the vane by a cord to that position, and adjusting the rack, &c., so that the pencil position on the sheet corresponded to that azimuth.

For measuring the pressure of the wind, the shaft of the vane carries a plate one foot square, which is supported by horizontal rods sliding into grooves, and is urged in opposi-

tion to the wind by three springs, so arranged that only one comes into play when the wind is light, and the others necessarily act in conjunction with the first as the plate is driven further and further by the force of the wind. A cord from this plate passes over a pulley, and communicates with a copper wire passing through the center of the spindle, which at the bottom communicates with another cord passing under a pulley and held in tension by a slight spring: and by this a pencil is moved transversely to the direction in which the paper fixed to the board is carried by the clock. Lines are printed upon the paper corresponding to different values of the pressure; the intervals of these lines were adjusted by applying weights of 1 lb., 2 lbs., &c., to move the pressure-plate in the same manner as if the wind pressed it.

A fresh sheet of paper is applied to this instrument every day at 22^h mean solar time.

§ 19. *Whewell's Anemometer.*

Although this instrument was actually read in the year 1863 and some results derived from it were published in weekly reports to the Registrar General, yet, as no observations are published in the present volume it appears unnecessary here to describe it at length. A full description of it, and a comparison of its results with those of Robinson's Anemometer (to be mentioned immediately) will be found in the Introduction 1862, pages xlix, l, li, and lii.

§ 20. *Robinson's Anemometer.*

This anemometer is self-registering, and was made by Messrs, Negretti and Zambra on the principles described by Dr. Robinson in the Transactions of the Royal Irish Academy, vol xxii. It is furnished with four hemispherical cups [each being 3·75 inches in diameter], attached to the extremities of two arms at right angles to each other, and revolving in a horizontal plane by the excess of pressure of the wind on their concave over that on their convex surfaces.

The distance between the centers of opposite cups is 13·45 inches, and their centers describe 42·24 inches in each revolution, indicating, according, to the theory, a horizontal movement of the air of 126·72 inches for each revolution, and of one mile for 500 revolutions. The accuracy of this theory was verified by experiments made in 1860 (to be described immediately). The horizontal arms are connected with a vertical spindle, upon which is an endless screw, working in a toothed wheel connected with a train of wheels, furnished with indices capable of registering one mile and decimal multiples of a mile up to 1,000 miles. The instrument is read every day at 22^h.

In the year 1860, on July 3, 4, and 13, experiments were made in Greenwich Park to ascertain the correctness of the theory of Robinson's anemometer; the point to be

verified being that the scale of the instrument, founded on the supposition that the horizontal motion of the air is about three times the space described by the centers of the cups, is correct.

A post about 5 feet high with a vertical spindle in the top was erected, and on this spindle turned a horizontal arm, carrying at the extremity of its longer portion Robinson's anemometer, and on its shorter portion a counterpoise. The distance from the vertical spindle of the post to the vertical axis of the anemometer was $17^{ft.}\ 8^{in.}\cdot 7$. The reading of the dial was taken, and then the arm was made to revolve in the horizontal plane 50 or 100 times, an attendant counting the number of revolutions, and the reading of the dial was again taken. In this manner 1,000 revolutions were made in the direction N.E.S.W.N., and 1,000 revolutions in the direction N.W.S.E.N. In some of the experiments the air was sensibly quiet, and in others there was a little wind; the result was,

For a movement of the instrument through one mile,

Beam revolving N.E.S.W. (opposite to the direction of rotation of the Anemometer-cups)	1·15 was registered
Beam revolving N.W.S.E. (in the same direction as the Anemometer-cups)	0·97 was registered

The results from rapid revolutions and from slow revolutions were sensibly the same.

This may be considered as confirming in a very high degree the accuracy of the theory.

§ 21. *Rain Gauges.*

The rain-gauge connected with Osler's anemometer is 50 feet 8 inches above the ground, and 205 feet 6 inches above the mean level of the sea. It exposes to the rain an area of 200 square inches (its horizontal dimensions being 10 by 20 inches).

The collected water passes through a tube into a vessel suspended in a frame by spiral springs, which lengthen as the water increases, until 0·24 of an inch is collected in the receiver; it then discharges itself by means of the following modification of the syphon. A copper tube, open at both ends, is fixed in the receiver, in a vertical position, with its end projecting below the bottom. Over the top of this tube a larger tube, closed at the top, is placed loosely. The smaller tube thus forms the longer leg, and the larger tube the shorter leg of a syphon. The water, having risen to the top of the smaller tube, gradually falls through it into the uppermost portion of a tumbling bucket, fixed in a globe under the receiver. When full, the bucket falls over, throwing the water into a small pipe at the lower part of the globe; the water completely fills the bore of the pipe; its descent causes an imperfect vacuum in the globe, sufficient to cause a draught in the longer leg of the syphon, and the whole contents run off. After leaving the globe, the water is received in a pipe attached to the

building, which carries it away. The springs then shorten and raise the receiver. The ascent and descent of the water-vessel move a radius-bar which carries a pencil; and this pencil makes a trace upon the paper carried by the sliding-board of the self-registering anemometer.

The scale of the printed paper was adjusted by repeatedly filling the water-vessel until it emptied itself, then weighing the water, and thus ascertaining its bulk, and dividing this bulk by the area of the surface of the rain receiver.

A second gauge, with an area 77 square inches nearly, is placed close to the preceding, the receiving surface of both being on the same horizontal plane.

A third gauge is placed on the roof of the Octagon room, at 38 feet $4\frac{1}{2}$ inches above the ground, and 193 feet $2\frac{1}{2}$ inches above the mean level of the sea. It is a simple cylinder gauge, 8 inches in diameter and about $50\frac{1}{4}$ inches in area. The height of the cylinder is $13\frac{1}{2}$ inches; at the depth of 1 inch from the top within the cylinder is fixed a funnel (an inverted cone) of 6 inches perpendicular height; with the point of this funnel is connected a tube, $\frac{1}{5}$ of an inch in diameter, and $1\frac{1}{2}$ inch in length; $\frac{3}{4}$ of an inch of this tube is slightly curved, and the remaining $\frac{3}{4}$ of an inch is bent upwards, terminating in an aperture of $\frac{1}{8}$ of an inch. By this arrangement, the last few drops of water remain in the bent part of the tube, and the water is some days evaporating. The upper part of the funnel or bore of the cone is connected with a brass ring, which has been turned in a lathe, and this is connected with a circular piece 6 inches in depth, which passes outside the cylinder, and rests in a water joint, attached to the inner cylinder, and extending all round.

A fourth gauge is placed on the top of the Library; it is a funnel, whose diameter is 6 inches; its exposed area is $28\frac{1}{4}$ inches nearly. The water passes into a cylinder, from which it is poured into a circular vessel, the diameter of which is $3\frac{1}{4}$ inches; and therefore 3·4 inches of this corresponds to 1 inch of rain. The receiving surface of the gauge is 22 feet 4 inches above the ground, and 177 feet 2 inches above the mean level of the sea.

A fifth gauge is planted on the roof of the Photographic Thermometer stand, 10 feet above the ground, and 164 feet 10 inches above the mean level of the sea. Its construction is the same as that of the third gauge.

A sixth gauge is a self-registering rain-gauge on Crosley's construction, made by Watkins and Hill. The surface exposed to the rain is 100 square inches. The collected water falls into a vibrating bucket, whose receiving concavity is entirely above the center of motion, and which is divided into two equal parts by a partition whose plane passes through the axis of motion. The pipe from the rain-receiver terminates immediately above the axis. Thus that part of the concavity which is highest is always in the position for receiving water from the pipe. When a certain quantity of water has fallen into it, it preponderates, and, falling, discharges its water into a cistern below; then the other part of the concavity receives the rain, and after a time

preponderates. Thus the bucket is kept in a state of vibration. To its axis is attached an anchor with pallets, which acts upon a toothed wheel by a process exactly the reverse of that of a clock-escapement. This wheel communicates motion to a train of wheels, each of which carries a hand upon a dial-plate; and thus inches, tenths, and hundredths are registered. Sometimes, when the escapement has obviously failed, the water which has descended to the lower cistern has again been passed through the gauge, in order to enable an assistant to observe the indication of the dial-plates without fear of an imperfection in the machinery escaping notice. The gauge is placed on the ground, 21 feet South of the Magnetic Observatory, and 156 feet 6 inches above the mean level of the sea.

The seventh and eighth gauges are placed near together, about 16 feet south of the Magnetic Observatory, 5 inches above the ground, and 155 feet 3 inches above the mean level of the sea. They are similar in construction and area to No. 3. These cylinders are sunk about 8 inches in the ground.

All these gauges, except No. 7, are read at 22^h daily; in addition, Crosley's gauge and No. 8 are read daily at 9^h p.m., and No. 7 at the end of each month only, to check the summation of the daily readings of No. 8.

Gauges Nos. 1, 2, 3, 5, 8 were made by Messrs. Negretti and Zambra; No. 4 by Troughton; No. 6 by Watkins and Hill; and No. 7 is an old gauge.

§ 22. *The Actinometer.*

The Actinometer used in former years is described in the Introduction to the *Magnetical and Meteorological Observations*, 1847. It has not been used for several years, and will probably require some modifications before it is again used.

§ 23. *Electrical Apparatus.*

The electrical apparatus consists of two parts, namely, the Moveable Apparatus, which is connected with a pole nearly 80 feet high planted 2 feet East of the north-east angle of the north arm of the Magnetic Observatory (before its extension in 1862); and the Fixed Apparatus, which is mounted in a projecting window in the ante-room of the Magnetic Observatory.

On the top of the pole is fixed a projecting cap, to which are fastened the ends of two iron rods, which terminate in a pit sunk in the ground, and are kept in tension by attached weights. These rods are to guide the moveable apparatus in its ascents and descents. Near the bottom of the pole is fixed a windlass; the rope upon which it acts passes over a pulley in the cap, and is used to raise the moveable apparatus, which when raised to the top is suspended on a hook.

The moveable apparatus consists of the following parts:—A plank in a nearly vertical position is attached to perforated iron bars, which slide upon the iron rods On the upper part of this plank is a cubical box. The box incloses a stout pillar of glass, having a conical hollow in its lower part. In the bottom of the box there is a large hole through which a cone of copper passes into the conical hollow of the glass pillar. In a space below the box a gas-lamp is placed, by the flame of which the copper cone and the lower part of the glass pillar are kept in a state of warmth. A copper wire is fastened round the glass pillar; its end is carried to a similar glass pillar, warmed in the same manner, near the north-western turret of the Octagon room; by this wire, whose length is about 400 feet, the atmospheric electricity is collected. To this wire, near the box, is attached another copper wire 0·1 inch in diameter, and about 73 feet long, at the end of which is a hook; a loaded brass lever connected with the fixed apparatus presses upon this hook, and thus keeps the wire in a state of tension, and at the same time establishes the electrical communication between the long horizontal wire and the fixed apparatus.

The fixed apparatus consists of these parts:—A glass bar, nearly 3 feet long, and thickest at its middle, is supported in a horizontal position, its ends being fixed in pieces of wood projecting downwards from the roof of the window. Near to each end is placed a small gas-lamp, whose chimney encircles the glass, and whose heat keeps the glass in a state of warmth proper for insulation. A brass collar surrounds the center of the glass bar; it carries one brass rod, projecting vertically upwards through a hole in the roof of the window-recess, to which rod are attached a small umbrella and the loaded lever above-mentioned; and it carries another rod projecting vertically downwards, to which is attached a horizontal brass tube in an East and West direction. On the North and South sides of this tube there project four horizontal rods, through the ends of which there pass vertical rods, which can be fixed by screws at any elevation; these are placed in connexion with the electrometers, which rest on the window seat.

The electrometers during the year 1863 consisted of a Double Gold Leaf Electrometer of the ordinary construction; two Volta's Electrometers, denoted by Nos. 1 and 2; a Henley's Electrometer; a Ronald's Spark Measurer; a Dry-pile Apparatus; and a Galvanometer,

Volta 1 and Volta 2 are of the same construction; each is furnished with a pair of straws 2 Paris inches in length; those of the latter being much heavier than those of the former: each instrument is furnished with a graduated ivory scale, whose radius is 2 Paris inches, and it is graduated into half Paris lines. In the original construction of these instruments it was intended that each division of No. 2 should correspond to five of No. 1: the actual relation between them has not yet been determined by observations at the Royal Observatory. The straws are suspended by hooks of fine copper wire to the suspension-piece, and they are at the distance of half a line from each other.

Henley's Electrometer is supported on the West end of the large horizontal tube by means of a vertical rod fixed in it. On each side of the upper part of this rod is affixed a semicircular plate of ivory, whose circumference is graduated; at the centers of these ivory plates two pieces of brass are fixed, which are drilled to receive fine steel pivots, carrying a brass axis, into which the index or pendulum is inserted; the pendulum terminates with a pith ball. The relation between the graduations of this instrument and those of the other electrometers has not been determined. This instrument has seldom been affected till Volta 2 has risen to above 100 divisions of its scale.

The spark measurer is similar in its construction to that at the Observatory at Kew. It consists of a vertical sliding rod terminated by a brass ball, which ball can be brought into contact with one of the vertical rods before referred to, also terminating in a ball; and it can be moved from it or towards it by means of a lever, with a wooden handle. During the operation of separating the balls, an index runs along a graduated scale, and exhibits the distance between the balls, and this distance measures the length of the spark.

The electrometers and the spark-measurer were originally constructed under the superintendence of Francis Ronalds, Esq., but have since received small alterations.

The dry-pile apparatus was made by Watkins and Hill; it is placed in connexion with the brass bar by a system of wires and brass rods. The indicator, which vibrates between the two poles, is a small piece of gold leaf. This instrument is very delicate, and it indicates at once the quality of the electricity. When the inclination of the gold leaf is such that it is directed towards the top of either pile, it remains there as long as the quantity of electricity continues the same or becomes greater: the position is sometimes expressed in the notes by the words "as far as possible." The angle which the gold leaf makes with the vertical at this time is about 40°.

The galvanometer was made by Gourjon of Paris, and consists of an astatic needle, composed of two large sewing needles, suspended by a split silk fibre, one of the needles of the pair vibrating within a ring formed by 2,400 coils of fine copper wire. The connexions of the two portions of wire forming these 2,400 coils are so arranged that it is possible to use a single system of 1,200 coils of single wire, or a system of 1,200 coils of double wire, or a system of 2,400 coils of single wire: in practice the last has always been used. A small ball communicating by a wire with one end of the coils is placed in contact at pleasure with the electric conductor, and a wire leading from the other end of the coil communicates with the earth. An adjustible circular card, graduated to degrees, is placed immediately below the upper needle; the numeration of its divisions proceeds in both directions from a zero. One of these directions is distinguished by the letter A, and the other by the letter B; and the nature of the indication represented by the deflection of the needle towards A or towards B will be ascertained from the following experiment. A voltaic battery being formed by means of a silver coin and a copper coin, having a piece of blotting paper moistened with

saliva between them: when the copper touches the small ball, and the wire which usually communicates with the earth is made to touch the silver, the needle turns towards A; when the silver touches the small ball, and the wire is made to touch the copper, the needle turns towards B.

§ 24. *Explanation of the Tables of Meteorological Observations.*

The mean daily value of the difference between dew-point temperature and air-temperature is the difference between the two numbers in the sixth and seventh columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, or they are found from the absolute maxima and minima, as determined by comparing the observations of the self-registering wet-bulb thermometers with those of the self-registering dry-bulb thermometers.

The difference between the mean temperature for the day and the mean for the same day of the year on an average of forty-three years, is found by comparison with a table of results deduced by Mr. Glaisher from forty-three years' observations, made at the Royal Observatory, ending 1856.

Little explanation of the results deduced from Osler's Anemometer appears to be necessary. It may be understood generally that the greatest pressure occurred in gusts of short duration.

Robinson's Anemometer is read off every day at 22^h (10^h A.M.).

The register of rain is read at 9^h P.M. from the Cylinder Rain-gauge partly sunk in the ground, described above as the "eighth." If, however, there appears to be any doubt as to the correctness of the results, reference is made to a Rain-gauge of similar construction and placed near to it, called above the "seventh."

For understanding the divisions of time under the heads of Electricity and Weather, the following remarks are necessary:—The day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is roughly subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the remarks before it apply (roughly) to the interval from midnight to 6 A.M., and those following it to the interval from 6 A.M. to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column.

The following is the explanation of the notation employed for record of electrical observations, it being premised that the quality of the Electricity is always to be supposed positive when no indication of quality is given:—

g cur.	denotes	*galvanic currents*	s	denotes	*strong*
m	...	*moderate*	sp	...	*sparks*
N	...	*negative*	v	...	*variable*
P	...	*positive*	w	...	*weak*

The duplication of the letter denotes an intensity of the modification described: thus, s s is very strong; v v, very variable.

The Clouds and Weather are described generally by Howard's Nomenclature; the figure denotes the proportion of sky covered by clouds, the whole sky being represented by 10. The notation is as follows:

a denotes *aurora borealis*
ci ... *cirrus*
ci-cu ... *cirro-cumulus*
ci-s ... *cirro-stratus*
cu ... *cumulus*
cu-s ... *cumulo-stratus*
d ... *dew*
h-d ... *heavy dew*
f ... *fog*
sl-f ... *slight fog*
th-f ... *thick fog*
fr ... *frost*
glm ... *gloom*
gt-glm.. *great gloom*
h-fr ... *hoar frost*
h ... *haze*
hl ... *hail*
so-ha ... *solar halo*
l ... *lightning*
li-cl ... *light clouds*
lu-co ... *lunar corona*
lu-ha ... *lunar halo*
m ... *meteor*
ms ... *meteors*
n ... *nimbus*
r ... *rain*
th-r ... *thin rain*
oc-r ... *occasional rain*
fr-r ... *frozen rain*

h-r denotes *heavy rain*
shs-r ... *showers of rain*
c-r ... *continued rain*
c-h-r ... *continued heavy rain*
m-r ... *misty rain*
fr-m-r ... *frequent misty rain*
sl-r ... *slight rain*
h-shs ... *heavy showers*
fr-shs ... *frequent showers*
fr-h-shs ... *frequent heavy showers*
li-shs ... *light showers*
oc-shs ... *occasional showers*
sq ... *squall*
sqs ... *squalls*
fr-sqs ... *frequent squalls*
h-sqs ... *heavy squalls*
fr-h-sqs ... *frequent heavy squalls*
sc ... *scud*
li-sc ... *light scud*
sl ... *sleet*
sn ... *snow*
sl-sn ... *slight snow*
s ... *stratus*
t ... *thunder*
t-s ... *thunder storm*
v ... *variable*
w ... *wind*
st-w ... *strong wind*

The foot-notes show the means and extremes of readings, and their departure in each month from average values, as found from the preceding Twenty-two Years' Observations; those relating to Humidity have been calculated from the Second Edition of Glaisher's Hygrometrical Tables.

§ 25. *Details of the Chemical Operations for the Photographic Records.*

Mr. Glaisher has drawn up the following account of the Chemical Processes employed in the Photographic Operations for the self-registration of the Magnetical and Meteorological Indications.

CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR PRIMARIES.

The paper used is similar to that made by Whatman; it is made by his successor Hollingsworth; it is strong and of even texture, and is prepared expressly for Photographic purposes.

First Operation.—Preliminary Preparation of the Paper.

The chemical solutions used in this process are the following:—

(1.) Sixteen grains of Iodide of Potassium are dissolved in one ounce of distilled water.

(2.) Twenty-four grains of Bromide of Potassium are dissolved in one ounce of distilled water.

(3.) When the crystals are dissolved, the two solutions are mixed together, forming the iodising solution. The mixture will keep through any length of time. Immediately before use, it is filtered through filtering paper.

A quantity of the paper, sufficient for the consumption of several weeks, is treated in the following manner, sheet after sheet.

The sheet of paper is pinned by its four corners to a horizontal board. Upon the paper, a sufficient quantity (about 50 minims, or $\frac{5}{48}$ of an ounce troy) of the iodising solution is applied, by pouring it upon the paper in front of a glass rod, which is then moved to and fro till the whole surface is uniformly wetted by the solution. Or, the solution may be evenly distributed by means of a camel's hair brush.

The paper thus prepared is allowed to remain in a horizontal position for a few minutes, and is then hung up to dry in the air; when dry, it is placed in a drawer, and may be kept through any length of time.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

A solution of Nitrate of Silver is prepared by dissolving 50 grains of crystallized Nitrate of Silver in one ounce of distilled water. In hot weather a few drops of Acetic Acid are added.

Then the following operation is performed in a room illuminated by yellow light.

The paper is pinned as before upon a board somewhat smaller than itself, and (by means of a glass rod, as before,) its surface is wetted with 50 minims of the nitrate of silver solution. It is allowed to remain a short time in a horizontal position, and, if any part of the paper still shines from the presence of a part of the solution unabsorbed into its texture, the superfluous fluid is taken off by the application of blotting paper.

The paper, still damp, is immediately placed upon the interior glass cylinder, and is covered by the exterior glass cylinder, and the united cylinders are mounted upon the revolving apparatus, to receive the spot of light formed by the mirror, which is carried by the magnet; or to receive the line of light passing through the thermometer tube.

Third Operation.—Development of the Photographic Trace.

When the paper is removed from the cylinder, it is placed as before upon a board, and a saturated solution of Gallic Acid, to which a few drops of Aceto-Nitrate of Silver are added, (in hot weather this solution is used at the temperature of the air, in cold weather it is heated to the temperature of 70° or 80°, or even higher if the weather is very cold,) is spread over the paper by means of a glass rod, and this action is continued until the trace is fully developed. When the trace is well developed, the paper is placed in a vessel with water, and repeatedly washed with several waters; a brush being passed lightly over both sides of the paper to remove any crystalline deposit.

Fourth Operation.—Fixing the Photographic Trace.

The Photograph is placed in a solution of Hyposulphite of Soda, made by dissolving four or five ounces of the Hyposulphite in a pint of water; it is plunged completely in the liquid, and allowed to remain from one to two hours, until the yellow tint of the Iodide of Silver is removed. After this the sheet is washed repeatedly with water, allowed to remain immersed in water for 24 hours, and afterwards placed within folds of linen cloths till nearly dry. Finally it is placed between sheets of blotting-paper, and is pressed.

Chemical Preparation and Treatment of the Photographic Paper for Secondaries.

The paper used is made by Rive; it is a strong wove paper of tolerably even texture, thin, but able to bear a great deal of wear.

First Operation.—Preliminary Preparation of the Paper.

The chemical solution required for this purpose is as follows:—

Two grains of Chloride of Ammonium are dissolved in one ounce of distilled water.

A sufficient quantity of this solution is placed in a flat-bottomed porcelain dish, and sheets of paper, one by one, are plunged within it; care being taken that no air bubbles remain between the paper and the solution; this may be prevented by slight pressure over the sheet by means of a bent glass rod. When a few sheets are thus immersed, they are turned over, and are taken out and hung to dry. Any number of sheets may thus be prepared.

An equally good result is obtained, by spreading over one side by means of a glass rod, as in the preparation of the Primaries, a solution of Chloride of Ammonium made by dissolving five grains in one ounce of distilled water.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

The solution required for this purpose is as follows:

To a filtered solution of Nitrate of Silver, (made by dissolving 50 grains of Crystallized Nitrate of Silver in one ounce of distilled water,) some strong solution of Ammonia is added; the whole becomes at first of a dark brown colour, but when a sufficient quantity of Ammonia is added the solution becomes perfectly clear; a few crystals of Nitrate of Silver are then added till the solution is a little dull, forming "Ammoniacal Nitrate of Silver;" it is then ready for use.

The following operation is performed in a room illuminated by yellow light:—

By means of a glass rod this solution is spread over the paper, whilst pinned on a board; the paper is dried before a fire, and is then in a fit state to be used for producing a Secondary.

Third Operation.—Formation of the Photographic Copy.

A sheet of the paper so prepared is placed in a printing frame with its prepared side upwards, upon a bed of blotting paper resting upon a sheet of plate-glass; the Primary is then placed on the paper with its own face downwards; and as it is necessary, for obtaining a correct copy of the Primary, that it should be in close contact with the prepared surface, a second sheet of plate-glass is placed over it, and the two are pressed together by clamps and screws. The whole is then exposed to the light (the Primary to be copied being above the paper on which the copy is to be made). The time required to produce a copy depends, in a great measure, upon the thickness of the paper on which the Primary is made, and on the actinic quality of the light; a period of five minutes in a bright sunshine, or one hour in clear daylight, is generally sufficient.

Fourth Operation.—Fixing the Photographic Secondary.

When an impression has been thus obtained, it is necessary that the undecomposed Salts of Silver remaining in the paper be removed.

For this purpose the Secondary is at once plunged into water and well washed on both sides, passing a camel's hair brush over every part of it; it is then plunged into a solution of Hyposulphite of Soda (made by dissolving two or three ounces of the Hyposulphite in a pint of water), and is left through a period varying from half an hour to an hour. It is then removed, and washed in plain water several times; and running water is allowed to pass over it for twenty-four hours.

The sheets are then placed within the folds of drying cloths, till nearly dry, and finally between sheets of blotting paper.

The process of obtaining a Tertiary from a Secondary is in every respect the same as that of obtaining a Secondary from a Primary.

§ 26. *Personal Establishment.*

The personal establishment during the year 1863 has consisted of James Glaisher, Esq., F.R.S., Superintendent of the Magnetical and Meteorological Department, and Mr. Thomas Downs, Assistant.

Three or four computers have usually been attached to the Department.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS.

1863.

ROYAL OBSERVATORY, GREENWICH.

INDICATIONS

OF

MAGNETOMETERS.

1863.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 4		Jan. 4						
h m	° ′ ″	h m		h m		h m	°	°
10. 59	20. 50. 40	11. 53	·1098					
11. 7	49. 55	12. 15	·1098					
12. 23	52. 50	12. 28	·1101					
12. 53	50. 30	13. 52	·1103					
13. 10	50. 50	14. 22	·1100					
13. 42	54. 5	16. 8	·1105					
13. 58	52. 25	18. 47	·1110					
14. 50	53. 0	18. 58	·1108					
15. 9	51. 5	19. 9	·1111					
15. 41	52. 20	20. 2	·1108					
	***	21. 22	·1107					
17. 24	51. 20	21. 37	·1102					
	***	21. 50	·1117					
18. 53	52. 35	22. 50	·1112					
19. 8	51. 35	23. 9	·1113					
19. 35	51. 45	23. 18	·1108					
20. 31	52. 40	23. 22	·1102					
21. 3	53. 35	23. 25	·1107					
21. 33	53. 50	23. 59	·1108					
22. 2	54. 55							
22. 10	54. 35							
22. 26	55. 45							
22. 53	54. 35							
23. 8	57. 0							
23. 27	57. 0							
23. 35	54. 45							
23. 50	56. 25							
23. 59	55. 20							
Jan. 5		Jan. 5				Jan. 5		
0. 0	20. 55. 20	0. 0	·1108			1. 0	48 ·0	
0. 57	55. 25	0. 24	·1111			3. 0	49 ·0	
1. 17	53. 55	0. 40	·1107			9. 0	50 ·5	
1. 30	55. 40		(†)			21. 0	46 ·5	
1. 40	55. 25	1. 0	·1099					
2. 0	54. 50	3. 0	·1073*					
2. 18	56. 0	4. 55	·1093					
2. 27	58. 20	5. 17	·1092					
2. 38	57. 5	5. 39	·1095					
2. 53	57. 35	5. 51	·1088					
3. 22	53. 0	6. 5	·1093					
4. 42	55. 50	6. 18	·1083					
5. 8	53. 15	6. 55	·1070					
5. 27	52. 20	7. 38:	·1093					
6. 13	56. 0	8. 20	·1090					
6. 37	48. 45	9. 8	·1090					
6. 50	47. 0	9. 30	·1095					
7. 8	41. 30	9. 50	·1086					
8. 8	53. 0	10. 5	·1089					
8. 58	52. 0	10. 17	·1081					
9. 22	49. 55	10. 45	·1099					
9. 40	50. 10	10. 59	·1094					
10. 2	48. 20	11. 8	·1096					
10. 10	50. 0	11. 25	·1091					
10. 21	47. 55	11. 37	·1093					
10. 37	47. 10	11. 56	·1087					
10. 50	49. 45	13. 17	·1096					
11. 0	48. 10	13. 35	·1094					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 5		Jan. 5						
h m	° ′ ″	h m		h m		h m	°	°
11. 23	20. 48. 15	13. 50	·1096					
11. 39	50. 0	16. 30	·1100					
12. 9	50. 20	17. 45	·1100					
12. 37	51. 55	18. 20	·1102					
13. 21	52. 10	18. 53	·1100					
13. 30	51. 55	20. 7	·1099					
14. 4	53. 30	20. 45	·1103					
14. 50	52. 50	21. 32	·1098					
15. 5	51. 35	22. 10	·1095					
15. 24	52. 55	22. 50	·1097					
16. 7	52. 10	23. 11	·1092					
16. 39	53. 15	23. 59	·1089					
17. 45	52. 45							
18. 9	51. 35							
18. 48	52. 40							
19. 9	52. 45							
20. 5	51. 0							
20. 53	53. 30							
21. 30	52. 20							
21. 47	50. 45							
	(†)							
Jan. 6		Jan. 6				Jan. 6		
	(†)	0. 0	·1089			1. 0	47 ·9	
1. 0	20. 58. 42*	0. 15	·1088			3. 0	49 ·0	
1. 25	54. 45	0. 27	·1089			9. 0	50 ·9	
1. 56	54. 5	0. 43	·1094			21. 0	45 ·5	
2. 14	56. 20	0. 50	·1093			22. 0	45 ·5	
	***	1. 30	·1099			23. 0	45 ·5	
3. 14	53. 5	2. 0	·1101					
3. 56	55. 30	2. 40	·1107					
4. 24	53. 10	3. 22	·1098					
4. 40	50. 10		***					
5. 24	55. 0	3. 50	·1099					
5. 37	53. 45	4. 8	·1086					
5. 48	54. 35	4. 22	·1089					
	***	4. 54	·1084					
6. 53	53. 10	5. 18	·1094					
7. 18	50. 15	5. 35	·1086					
7. 27	51. 5	5. 47	·1092					
7. 52	46. 20		***					
8. 5	48. 0	6. 26	·1096					
8. 13	48. 20	6. 42	·1093					
8. 36	50. 55	7. 13	·1084					
9. 2	49. 40	7. 23	·1088					
10. 22	51. 20	7. 45	·1083					
10. 47	50. 25	8. 10	·1089					
11. 9	46. 45	8. 21	·1085					
11. 23	47. 55	8. 47	·1087					
11. 37	46. 45	8. 59	·1092					
11. 58	49. 5	9. 12	·1090					
12. 25	47. 0	9. 43	·1092					
13. 2	50. 45	9. 52	·1090					
13. 24	50. 45	10. 5	·1093					
13. 43	49. 40	10. 25	·1092					
14. 20	51. 50	10. 38	·1094					
14. 47	51. 30	10. 58	·1093					
15. 24	52. 5	11. 17	·1098					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

January 5. The Vertical Force Magnet was received from Mr. Simms, it was suspended in the Library for the determination of its time of vibration in the horizontal plane, and placed in position on January 8 for observation.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 6		Jan. 6						
h m	° ′ ″	h m		h m		h m	°	°
15. 46	20. 49. 45	12. 2	·1099					
16. 54	49. 45	12. 28	·1095					
17. 14	51. 20	12. 54	·1097					
17. 33	51. 15	13. 19	·1092					
	***	14. 5	·1089					
18. 19	48. 30	14. 22	·1093					
18. 28	49. 0	15. 0	·1092					
18. 55	48. 15	15. 22	·1097					
19. 51	49. 40	15. 30	·1095					
21. 34	50. 0	15. 49	·1098					
22. 35	50. 50	16. 25	·1096					
22. 36	53. 45	17. 10	·1099					
22. 49	56. 0		***					
22. 53	54. 5	18. 23	·1106					
23. 22	52. 10	19. 7	·1101					
23. 59	53. 20	19. 39	·1103					
		20. 30	·1097					
		21. 23	·1094					
		21. 37	·1098					
		21. 58	·1095					
		22. 2	·1087					
		22. 8	·1095					
		22. 53	·1093					
		23. 1	·1097					
		23. 13	·1095					
		23. 54	·1096					
		23. 59	·1097					
Jan. 7		Jan. 7				Jan. 7		
0. 0	20. 53. 20	0. 0	·1097			0. 0	45 ·5	
0. 38	54. 15		***			1. 0	46 ·0	
1. 11	53. 0	0. 32	·1101			2. 0	47 ·0	
2. 6	53. 35	1. 11	·1100			3. 0	47 ·5	
2. 53	50. 50	1. 58	·1101			6. 0	49 ·2	
3. 21	52. 30	3. 9	·1094			9. 0	48 ·7	
4. 13	50. 15	4. 29	·1102			12. 0	46 ·5	
5. 6	49. 0	5. 17	·1102			21. 0	43 ·0	
5. 51	49. 40	5. 37	·1105			22. 0	43 ·0	
6. 28	49. 0	5. 52	·1103			23. 0	43 ·5	
8. 7	50. 50	6. 4	·1105					
9. 36	49. 20	6. 58	·1099					
9. 54	46. 0	7. 24	·1102					
10. 24	48. 15	7. 51	·1099					
10. 39	47. 20	8. 38	·1096					
12. 22	49. 10	9. 12	·1097					
13. 17	48. 15	9. 38	·1093					
13. 54	48. 55	10. 8	·1102					
14. 4	47. 20	10. 29	·1097					
14. 15	47. 55	10. 42	·1099					
15. 42	43. 45	11. 8	·1095					
16. 9	46. 15	11. 40	·1100					
16. 32	45. 25	13. 28	·1098					
17. 37	49. 30	13. 52	·1100					
18. 21	50. 0	14. 13	·1116					
	***	14. 27	·1115					
19. 54	48. 45	14. 50	·1102					
20. 55	49. 5	15. 30	·1100					
	***	17. 45	·1101					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 7		Jan. 7						
h m	° ′ ″	h m		h m		h m	°	°
22. 14	20. 52. 50	19. 15	·1106					
22. 37	51. 45	19. 34	·1110					
23. 19	54. 15	19. 45	·1107					
23. 36	56. 20	20. 7	·1111					
23. 44	55. 35	20. 25	·1107					
23. 59	56. 50	20. 50	·1099					
		21. 21	·1094					
		23. 8	·1105					
		23. 24	·1109					
		23. 37	·1104					
		23. 59	·1106					
Jan. 8		Jan. 8		Jan. 8		Jan. 8		
0. 0	20. 56. 50	0. 0	·1106		(†)	0. 0	44 ·0	
1. 3	20. 56. 35	0. 8	·1106	2. 30	·01990	1. 0	45 ·0	
1. 21	21. 0. 40	0. 17	·1101	3. 30	·01967	2. 0	46 ·0	
1. 36	21. 0. 35	0. 54	·1103	4. 20	·01895	3. 0	47 ·2	
2. 0	20. 56. 45		(†)	5. 30	·01860	9. 0	49 ·9	50 ·7
2. 59	53. 35	1. 39	·1091	5. 59	·01857	21. 0	43 ·0	44 ·0
3. 22	56. 0	2. 23	·1100	8. 6	·01737			
3. 34	54. 5	2. 38	·1107	10. 4	·01667			
3. 43	58. 50	2. 49	·1105	10. 25	·01690			
4. 0	46. 35	3. 6	·1106	10. 41	·01685			
4. 11	52. 35	3. 20	·1108	11. 38	·01700			
4. 45	59. 30	3. 32	·1101	13. 55	·01800			
5. 0	20. 57. 35	3. 38	·1107	14. 55	·01807			
5. 23	21. 1. 0	3. 52	·1076	17. 45	·01917			
5. 43	20. 57. 5	4. 5	·1097	19. 4	·01977			
5. 54	52. 25	4. 20	·1107	21. 44	·02035			
6. 8	51. 20	4. 39	·1107	23. 59	·02050			
6. 15	54. 20	4. 54	·1102					
6. 39	47. 30	5. 19	·1106					
7. 2	47. 25	5. 27	·1097					
7. 17	44. 0	5. 35	·1101					
7. 38	23. 35	5. 50	·1090					
7. 50	31. 10	6. 11	·1092					
8. 1	35. 40	6. 32	·1071					
	***	6. 53	·1081					
8. 22	36. 45	7. 27	·1072					
8. 44	43. 20	7. 44	·1097					
9. 6	45. 35	8. 7	·1077					
9. 20	44. 5	8. 18	·1071					
9. 37	45. 0	8. 38	·1077					
10. 5	31. 40	8. 55	·1077					
10. 9	26. 35	8. 58	·1084					
10. 18	24. 30	9. 15	·1078					
10. 28	33. 5	9. 26	·1083					
11. 2	46. 45	9. 40	·1077					
	***	9. 51	·1075					
12. 39	49. 10	10. 5	·1063					
13. 7	47. 10	10. 24	·1097					
13. 42	49. 5	10. 47	·1091					
14. 3	46. 5	11. 12	·1089					
14. 11	46. 20	11. 21	·1093					
14. 47	41. 0		***					
15. 22	44. 25	12. 35	·1093					
15. 36	44. 15	12. 50	·1096					
15. 52	47. 25		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Jan. 11 h m		h m		h m	°	°
		22. 54	·1096					
		23. 5	·1103					
		23. 28	·1090					
		23. 53	·1084					
			(†)					
Jan. 12		Jan. 12		Jan. 12		Jan. 12		
0. 0	20. 54. 0		(†)	0. 0	·01780	1. 0	42 ·8	43 ·0
0. 24	51. 25	1. 0	·1095	3. 2	·01763	3. 0	44 ·5	45 ·0
0. 40	51. 35	1. 14	·1094	3. 29	·01732	9. 0	46 ·5	46 ·2
0. 54	55. 0	1. 49	·1103	3. 53	·01740	21. 0	47 ·2	48 ·0
1. 21	53. 40	2. 0	·1100	4. 26	·01700			
1. 50	55. 10	2. 21	·1113	4. 43	·01710			
2. 0	53. 30	2. 32	·1103	5. 14	·01665			
2. 39	51. 0		***	8. 0	·01563			
3. 9	51. 45	3. 8	·1115	8. 8	·01573			
3. 24	49. 20	3. 34	·1086	8. 29	·01520			
3. 37	41. 25	3. 56	·1116	10. 57	·01506			
3. 49	38. 20	4. 8	·1114	11. 55	·01470			
4. 9	44. 20	4. 35	·1078	14. 18	·01490			
4. 26	41. 5	5. 0	·1115	14. 47	·01455			
4. 52	24. 50	5. 11	·1116	16. 0	·01470			
5. 13	41. 20	5. 21	·1097	16. 47	·01455			
5. 33	30. 35	5. 30	·1094	17. 33	·01470			
5. 45	36. 20	5. 46	·1114	18. 51	·01460			
	***	6. 0	·1102	20. 25	·01460			
6. 24	48. 5	6. 9	·1095	21. 27	·01422			
7. 5	49. 15		***	23. 0	·01405			
7. 23	45. 45	6. 46	·1096	23. 59	·01420			
7. 29	47. 30		***					
7. 45	45. 35	7. 9	·1092					
8. 0	38. 0	7. 22	·1094					
8. 19	51. 35	7. 32	·1103					
8. 30	46. 30	7. 44	·1102					
8. 36	46. 50	7. 56	·1096					
8. 59	47. 25	8. 13	·1141					
9. 37	46. 50	8. 27	·1108					
10. 12	44. 30	8. 35	·1111					
10. 30	47. 5	8. 41	·1106					
10. 49	45. 0	8. 51	·1106					
11. 2	48. 45	9. 6	·1113					
11. 17	49. 0	9. 15	·1109					
11. 35	52. 55	9. 29	·1111					
11. 54	50. 15	10. 25	·1100					
12. 23	49. 30	10. 40	·1103					
12. 39	47. 0	10. 54	·1118					
13. 38	49. 55	11. 13	·1107					
14. 9	55. 30	11. 29	·1118					
14. 45	49. 35	11. 55	·1116					
14. 55	50. 50	12. 13	·1109					
15. 8	49. 55		***					
15. 39	51. 45	13. 11	·1104					
15. 53	54. 55		***					
16. 41	47. 30	14. 3	·1105					
17. 10	47. 25	14. 23	·1115					
	***	14. 49	·1108					
17. 38	51. 10	15. 4:	·1109					
17. 47	48. 15	15. 9	·1105					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 12 h m	° ′ ″	Jan. 12 h m		h m		h m	°	°
18. 58	20. 51. 55	15. 30	·1103					
	***		***					
19. 55	49. 30	16. 10	·1111					
	***	16. 19	·1119					
20. 23	48. 35	16. 22	·1115					
20. 37	54. 5	17. 22	·1108					
	***		***					
21. 42	50. 20	17. 45	·1111					
22. 0	51. 0	17. 51	·1105					
22. 10	53. 25	18. 4	·1115					
	***		***					
22. 39	53. 30	18. 53	·1116					
	***	19. 21	·1105					
23. 7	55. 25	19. 28	·1105					
23. 22	53. 0	19. 38	·1100					
23. 43	57. 30		***					
23. 51	56. 0	20. 18	·1095					
23. 59	59. 10	20. 39	·1104					
			***					
		21. 10	·1099					
		21. 35	·1102					
			***					
		22. 8	·1095					
		22. 24	·1096					
		22. 32:	·1091					
		22. 50	·1089					
			***					
		23. 25	·1054					
			***					
		23. 59	·1075					
Jan. 13		Jan. 13		Jan. 13		Jan. 13		
0. 0	20. 59. 10	0. 0	·1075	0. 0	·01420	1. 0	49 ·0	50 ·0
1. 8	54. 30	0. 8	·1080	3. 0	·01450	3. 0	50 ·0	50 ·7
1. 23	55. 25	0. 13	·1078	3. 51	·01415	9. 0	49 ·5	50 ·0
1. 52	53. 55	0. 37	·1085	7. 12	·01343	21. 0	45 ·5	46 ·0
2. 9	55. 10		***	9. 42	·01354	22. 0	45 ·5	46 ·5
2. 40	52. 10	1. 10	·1092	10. 50	·01390	23. 0	45 ·8	46 ·5
2. 54	49. 20	1. 24	·1098	11. 13	·01380			
3. 19	47. 45		***	11. 49	·01403			
4. 14	48. 30	2. 1	·1105	15. 18	·01465			
4. 35	50. 5	2. 34	·1090	17. 9	·01490			
5. 7	49. 5		***	19. 15	·01540			
5. 20	49. 30	3. 23	·1109	20. 54	·01560			
6. 43	47. 20		***	21. 15	·01585			
7. 7	49. 30	4. 19	·1106	22. 27	·01627			
7. 34	47. 35		***	23. 59	·01642			
7. 45	47. 45	5. 47	·1110					
7. 58	46. 20	5. 54	·1107					
8. 27	46. 40	6. 17	·1107					
8. 52	48. 45	6. 30	·1110					
9. 9	47. 45	7. 23	·1100					
9. 34	48. 40	7. 34	·1104					
9. 48	45. 10	7. 49	·1099					
10. 3	49. 5	7. 57	·1101					
10. 28	34. 50		***					
11. 6	47. 50	8. 42	·1105					
11. 26	43. 30	9. 1	·1102					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Jan. 13	
h m	° ′ ″
11. 47	20. 41. 50
12. 21	47. 45
13. 39	49. 15
14. 0	51. 0
	***
14. 51	50. 35
15. 30	53. 55
15. 50	55. 30
16. 16	52. 55
16. 27	50. 45
16. 37	51. 40
17. 0	50. 0
	***
17. 58	49. 20
18. 37	50. 25
18. 57	49. 5
20. 9	49. 35
20. 25	50. 25
20. 39	53. 0
21. 25	50. 0
21. 37	51. 20
22. 7	49. 15
22. 20	51. 35
22. 48	51. 0
23. 3	52. 30
23. 36	51. 35
23. 59	50. 10
Jan. 14	
0. 0	20. 50. 10
0. 8	52. 5
0. 12	53. 55
0. 19	53. 0
1. 21	52. 45
1. 41	54. 20
1. 54	53. 30
	***
2. 59	51. 35
4. 9	48. 0
4. 18	48. 35
4. 28	46. 35
4. 50	39. 25
5. 9	43. 0
5. 22	43. 0
5. 51	49. 25
6. 13	49. 55
6. 36	48. 50
7. 12	48. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 13	
h m	
9. 30	·1105
	***
10. 17	·1095
10. 26	·1100
10. 47	·1095
10. 56	·1102
11. 22	·1096
11. 57	·1113
12. 9	·1106
	***
13. 17	·1105
13. 26	·1110
13. 40	·1105
	***
14. 18	·1108
14. 30	·1105
14. 41	·1107
15. 8	·1098
15. 58	·1106
16. 27	·1116
16. 38	·1114
16. 54	·1119
17. 45	·1112
17. 59	·1114
	***
19. 31	·1115
19. 50	·1112
20. 2	·1112
20. 40	·1081
	***
21. 30	·1098
21. 42	·1098
22. 5	·1103
	***
23. 33	·1099
23. 51	·1098
23. 59	·1101
Jan. 14	
0. 0	·1101
0. 7	·1103
1. 39	·1105
2. 0	·1100
	***
2. 47	·1107
3. 4	·1106
3. 6	·1111
3. 15	·1110
3. 41	·1111
4. 20	·1106
4. 42	·1086
5. 27	·1111
5. 40	·1108
	***
7. 5	·1109
7. 32	·1112
7. 51	·1107
8. 13	·1125

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 14	
0. 0	·01642
2. 15	·01664
4. 16	·01615
4. 40	·01593
4. 58	·01590
6. 57	·01490
8. 14	·01465
8. 43	·01463
9. 15	·01440
9. 40	·01463
10. 42	·01480
12. 45	·01473
13. 2	·01488
13. 48	·01485
16. 36	·01555
17. 26	·01557
21. 10	·01654
	·01563
22. 0	·01600

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 14		
0. 0	46 ·0	47 ·0
1. 0	46 ·0	47 ·0
2. 0	47 ·5	48 ·0
3. 0	48 ·0	49 ·0
6. 0	49 ·1	49 ·0
9. 0	47 ·5	48 ·0
12. 0	46 ·6	46 ·3
21. 0	43 ·9	44 ·5
22. 0	44 ·3	45 ·0
23. 0	44 ·8	45 ·4

Greenwich Mean Solar Time.	Western Declination.
Jan. 14	
h m	° ′ ″
7. 41	20. 47. 10
7. 45	45. 15
8. 5	37. 10
8. 16	39. 40
8. 27	35. 40
8. 53	50. 35
9. 13	46. 25
9. 34	45. 10
9. 52	47. 15
10. 23	44. 50
10. 49	48. 55
11. 53	47. 0
12. 12	37. 35
12. 26	40. 50
12. 46	41. 30
13. 3	46. 10
13. 19	51. 5
13. 40	46. 25
14. 2	49. 45
15. 6	51. 15
15. 21	49. 10
15. 59	48. 20
16. 24	51. 45
16. 54	52. 50
17. 3	54. 0
17. 26	52. 50
	***
18. 53	50. 15
19. 26	52. 5
20. 8	50. 0
	***
21. 36	49. 40
21. 40	50. 35
21. 54	48. 45
22. 17	50. 55
22. 28	49. 40
22. 37	53. 30
22. 54	53. 5
23. 36	56. 0
23. 45	54. 35
23. 59	56. 5
Jan. 15	
0. 0	20. 56. 5
0. 27	55. 50
1. 5	54. 15
1. 39	55. 0
1. 54	53. 50
3. 53	48. 35
4. 22	43. 40
4. 42	44. 5
4. 50	46. 15
5. 25	43. 30
5. 41	40. 0
5. 58	45. 35
6. 37	47. 0
6. 50	41. 0
7. 6	45. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 14	
h m	
8. 18	·1124
8. 36	·1146
9. 16	·1102
9. 41	·1109
10. 10	·1104
10. 41	·1110
10. 53	·1108
11. 7	·1117
11. 16	·1114
11. 30	·1121
11. 40	·1118
12. 8	·1124
12. 18	·1128
12. 48	·1109
	***
13. 23	·1120
13. 40	·1108
13. 53	·1115
14. 18	·1111
14. 33	·1114
14. 44	·1111
15. 19	·1112
15. 39	·1115
16. 47	·1110
17. 11	·1115
17. 31	·1114
18. 10	·1120
18. 25	·1117
18. 39	·1119
19. 1	·1117
19. 24	·1121
20. 7	·1112
	***
20. 53	·1112
21. 45	·1093
22. 10	·1100
	***
23. 9	·1097
	***
23. 59	·1100
Jan. 15	
0. 0	·1100
0. 9	·1101
	***
2. 0	·1113
	***
3. 24	·1113
3. 31	·1112
	***
4. 14	·1107
4. 49	·1118
4. 55	·1117
5. 6	·1118
5. 22	·1113
5. 37	·1099
5. 55	·1112

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 14	
h m	
22. 40	·01610
	(†)
Jan. 15	
	(†)
0. 10	·01600
2. 8	·01585
5. 26	·01435
5. 48	·01438
6. 40	·01400
6. 49	·01403
7. 19	·01380
7. 26	·01380
7. 57	·01350
8. 59	·01350
	·01455
12. 12	·01465
17. 59	·01566
21. 5	·01605

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 15		
0. 0	45 ·0	46 ·3
1. 0	45 ·8	47 ·0
2. 0	47 ·5	48 ·0
3. 0	48 ·0	48 ·5
9. 0	48 ·0	47 ·6
21. 7	44 ·1	44 ·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Jan. 15	
h m	° ′ ″
7. 11	20. 45. 5
7. 28	37. 10
7. 56	47. 25
8. 8	46. 10
8. 23	47. 45
8. 35	46. 55
8. 45	48. 50
9. 8	47. 55
10. 23	48. 45
11. 36	47. 55
12. 7	49. 10
12. 36	48. 45
13. 34	49. 0
14. 5	50. 25
14. 23	50. 45
14. 37	53. 0
15. 2	49. 50
15. 39	50. 25
16. 2	49. 40
17. 4	49. 40
17. 26	50. 50
18. 41	51. 25
19. 9	52. 25
19. 37	51. 30
19. 53	52. 5
21. 21	48. 35
21. 42	48. 30
	(†)
23. 46	50. 0
23. 59	50. 25
Jan. 16	
0. 0	20. 52. 25
0. 43	53. 20
1. 2	53. 0
1. 21	54. 15
2. 9	49. 20
2. 37	51. 0
3. 0	51. 5
3. 9	49. 30
3. 36	50. 20
4. 29	48. 35
4. 42	46. 15
5. 16	46. 30
5. 30	48. 5
5. 39	46. 50
5. 43	48. 0
5. 54	45. 0
6. 15	27. 40
6. 49	42. 45
6. 57	43. 15
7. 7	46. 40
7. 15	46. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 15	
h m	
6. 8	·1111
6. 24	·1117
6. 44	·1106
6. 55	·1122
7. 18	·1119
7. 34	·1138
7. 45	·1136
8. 0	·1118
8. 12	·111
8. 22	·1112
8. 35	·1116
8. 47	·1113
9. 13	·1117
9. 42	·1123
10. 13	·1118
10. 20	·1116
10. 47	·1120
11. 14	·1117
11. 25	·1121
13. 15	·1120
13. 54	·1123
14. 9	·1120
14. 16	·1121
14. 47	·111
16. 51	·1124
	***
17. 31	·1121
18. 0	·1124
18. 26	·1123
19. 15	·1126
20. 3	·1118
20. 22	·1120
20. 43	·111
	(†)
Jan. 16	
0. 0	·1114
0. 43	·1117
1. 7	·1117
1. 45	·1108
2. 8	·1108
2. 37	·1118
2. 56	·1122
3. 43	·1120
4. 28	·1118
5. 0:	·1109
5. 30	·1114
5. 56	·1106
6. 8	·1097
6. 33	·1136
6. 57	·1105
7. 11	·1097
7. 24	·1096
7. 30	·1100
7. 44	·1097
8. 0	·1102
8. 9	·1095
8. 24	·1104

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 15	
h m	
	(†)
23. 35	·01550
23. 59	·01533
Jan. 16	
0. 0	·01533
2. 12	·01551
4. 39	·01423
5. 51	·01390
6. 14	·01410
6. 48	·01377
10. 51	·01335
13. 44	·01373
14. 17	·01375
14. 35	·01360
15. 0	·01347
15. 57	·01370
16. 48	·01370
18. 3	·01413
18. 20	·01408
20. 25	·01480
23. 40	·01560
	(†)
23. 54	·01540

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 16		
1. 0	46 ·0	47 ·0
3. 0	47 ·2	47 ·8
9. 0	47 ·5	47 ·3
21. 0	43 ·3	44 ·0

Greenwich Mean Solar Time.	Western Declination.
Jan. 16	
h m	° ′ ″
7. 23	20. 44. 45
7. 36	46. 40
7. 47	45. 45
8. 1	47. 5
8. 14	45. 30
8. 28	46. 45
9. 37	47. 50
9. 51	46. 35
10. 14	46. 0
10. 37	47. 40
10. 53	42. 0
11. 5	43. 35
11. 21	43. 25
12. 4	46. 5
	***
13. 22	49. 30
14. 4	46. 35
14. 23	50. 5
14. 54	46. 0
15. 42	50. 0
15. 59	52. 10
16. 54	48. 55
17. 53	20. 57. 35
18. 4	21. 0. 0
18. 37	20. 55. 35
18. 53	54. 45
19. 8	53. 15
19. 39	53. 45
19. 53	50. 40
20. 24	49. 30
	***
22. 20	49. 55
	***
23. 12	51. 30
	***
23. 40	54. 0
23. 59	52. 5
Jan. 17	
0. 0	20. 52. 5
0. 4	51. 45
0. 28	56. 10
0. 39	54. 35
0. 51	55. 40
1. 10	53. 30
1. 35	54. 55
2. 15	50. 40
2. 36	51. 5
3. 56	48. 50
4. 24	49. 25
4. 54	48. 30
8. 9	48. 10
8. 45	49. 0
9. 23	39. 25
10. 7	47. 40
10. 13	46. 45
	***
11. 12	48. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 16	
h m	
9. 9	·1112
9. 39	·1112
10. 6	·1115
10. 18	·1114
11. 6	·1127
11. 20	·1122
11. 47	·1127
12. 9	·1120
13. 1	·1118
	***
13. 49	·1121
14. 1	·1126
14. 22	·1112
14. 36	·1111
15. 1	·1136
15. 21	·1135
15. 55	·1125
16. 56	·1134
17. 20	·1127
18. 5	·1127
18. 15	·1125
18. 56:	·1132
19. 43:	·1111
20. 3	·1115
20. 36	·1113
21. 25	·1116
22. 29	·1102
23. 14	·1110
23. 59	·1113
Jan. 17	
0. 0	·1113
0. 30	·1112
0. 48	·1112
1. 3	·1106
1. 35	·1116
1. 45	·1112
2. 8	·1118
2. 41	·1117
3. 17	·1122
	***
5. 7	·1130
6. 40	·1122
7. 8	·1124
8. 11	·1117
8. 46	·1120
8. 56	·1117
9. 17	·1120
9. 27	·1123
10. 17:	·1119

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 17	
0. 0	·01540
1. 18	·01530
1. 30	·01540
2. 15	·01510
4. 36	·01355
6. 35	·01300
9. 14	·01265
11. 33	·01270
14. 18:	·01365
18. 2	·01577
20. 7	·01620
23. 15	·01630
23. 39	·01624

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 17		
1. 0	46 ·5	47 ·0
3. 0	47 ·5	48 ·0
9. 0	47 ·8	47 ·3
23. 10	44 ·0	45 ·0

The indications are taken from the curves of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Jan. 17 h m	° ′ ″
11. 29	20. 47. 10
11. 40	48. 0
12. 27	47. 55
12. 45	50. 0
13. 40	49. 30
16. 8	48. 25
16. 38	48. 50
17. 38	47. 35
18. 11	49. 5
18. 32	47. 50
19. 4	48. 15
20. 18	46. 0
20. 51	45. 50
21. 23	47. 20
21. 43	46. 5
21. 50	47. 35
22. 55	48. 40
23. 43	51. 55
23. 54	51. 20
23. 59	51. 45
Jan. 18	
0. 0	20. 51. 50
0. 8	51. 25
0. 26	53. 10
1. 40	52. 20
2. 3	53. 50
2. 11	52. 40
4. 5	46. 55
4. 23	42. 40
5. 28	49. 10
8. 20	48. 15
10. 37	48. 30
10. 54	45. 35
11. 22	48. 20
11. 40	47. 0
12. 33	48. 35
14. 52	49. 0
17. 11	48. 5
17. 38	49. 15
19. 9	47. 20
20. 37	46. 50
23. 59	52. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 17 h m	
11. 8	·1125
12. 7	·1121
12. 30	·1126
12. 44	·1125
13. 5	·1127
14. 55	·1129
16. 28	·1127
17. 24	·1129
18. 10	·1124
18. 30	·1128
18. 50	·1124
20. 35	·1124
20. 44	·1122
22. 52	·1115
23. 55	·1115
23. 59	·1114
Jan. 18	
0. 0	·1114
0. 13	·1111
0. 47	·1116
0. 57	·1114
2. 4	·1122
2. 15	·1118
2. 51	·1119
3. 5	·1117
3. 25	·1118
	***
4. 7	·1109
4. 19	·1113
4. 46	·1116
5. 6	·1115
5. 40	·1116
9. 2	·1118
10. 13	·1116
10. 36	·1118
10. 49	·1122
11. 14	·1118
12. 53	·1115
13. 1	·1113
14. 11	·1112
14. 50	·1114
17. 15	·1115
17. 37	·1113
18. 9	·1116
19. 12	·1116
19. 18	·1114
20. 26	·1112
20. 46	·1106
21. 23	·1105
21. 31	·1107
22. 31	·1107
23. 3	·1102

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 18	
0. 0	·01624
1. 57	·01610
4. 12	·01464
5. 52	·01370
9. 28:	·01317
14. 42	·01373
21. 27	·01290
23. 59	·01300

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 18		
7. 45	45 ·8	46 ·4
21. 0	46 ·2	47 ·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Jan. 19	
0. 0	20. 52. 15
1. 4	53. 55
1. 43	53. 10
2. 16	51. 0
4. 26	47. 5
5. 11	48. 0
6. 17	46. 35
6. 54	47. 10
7. 13	46. 15
7. 37	46. 50
8. 5	45. 45
8. 33	46. 25
9. 9	43. 10
9. 23	45. 15
9. 41	41. 35
10. 4	42. 0
10. 41	46. 40
12. 23	48. 20
14. 35	49. 5
15. 9	50. 35
15. 36	48. 10
15. 59	47. 35
16. 14	48. 45
16. 28	47. 25
16. 47	48. 15
17. 15	47. 40
19. 58	46. 40
20. 52	47. 10
21. 32	46. 50
22. 49	49. 15
23. 39	53. 10
23. 59	53. 35
Jan. 20	
0. 0	20. 53. 35
1. 25	52. 0
2. 5	50. 35
3. 5	49. 55
3. 54	48. 25
9. 10	46. 50
13. 23	48. 30
14. 17	48. 45
14. 37	50. 50
15. 8	49. 15
18. 47	48. 50
20. 58	47. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 18 h m	
23. 52	·1099 (†)
Jan. 19	
0. 45	·1099
1. 7	·1101
1. 15	·1099
1. 53	·1102
2. 8	·1098
2. 30	·1102
2. 48	·1103
3. 2	·1097
3. 37	·1097
4. 10	·1092
5. 5	·1093
5. 25	·1098
7. 12	·1099
7. 32:	·1096
8. 15	·1099
8. 33	·1096
9. 14	·1106
	***
10. 22	·1095
10. 33	·1098
10. 49	·1096
11. 5	·1100
11. 13	·1098
13. 31	·1101
13. 48	·1103
15. 9	·1103
16. 15	·1104
16. 58	·1102
17. 45	·1105
17. 52	·1099
19. 48	·1099
20. 17	·1096
21. 4	·1094
21. 20	·1089
22. 45	·1085
23. 15	·1087
23. 20	·1090
23. 46	·1089
23. 59	·1089
Jan. 20	
0. 0	·1089
0. 11	·1091
0. 40	·1089
0. 56	·1084
2. 4	·1085
3. 7	·1089
3. 55	·1089
5. 18	·1093
6. 7	·1089
8. 31	·1091
8. 58	·1093
10. 52	·1095

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 19	
0. 0	·01300
1. 57	·01270
	·01300
4. 4	·01300
9. 40	·01295
15. 9	·01300
20. 8	·01330
21. 6	·01330
21. 37	·01327
22. 41	·01285
23. 59	·01275
Jan. 20	
0. 0	·01275
2. 54	·01280
	·01360
4. 30	·01335
4. 52	·01350
6. 42	·01343
11. 10	·01488
14. 40	·01543
22. 0	·01577
23. 59	·01620

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 19		
1. 0	49 ·8	50 ·7
3. 0	50 ·8	51 ·7
9. 0	53 ·0	52 ·2
21. 0	50 ·2	50 ·5
Jan. 20		
1. 0	51 ·3	50 ·2
3. 0	52 ·0	50 ·5
9. 0	49 ·0	48 ·0
21. 0	43 ·2	43 ·9
22. 0	43 ·3	44 ·0
23. 0	44 ·0	44 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Jan. 20 h m	° ′ ″
22. 28	20. 48. 55
23. 59	52. 0
Jan. 21	
0. 0	20. 52. 0
1. 24	52. 10
3. 0	49. 30
4. 9	48. 30
4. 58	49. 25
5. 6	48. 35
5. 27	50. 40
6. 24	48. 40
	***
9. 8	48. 55
9. 42	49. 35
10. 0	48. 0
10. 23	48. 50
10. 36	47. 55
11. 12	48. 0
11. 39	47. 15
11. 57	46. 5
12. 21	47. 20
12. 39	46. 35
13. 22	48. 50
13. 45	48. 5
14. 7	49. 20
	***
15. 39	47. 45
15. 57	48. 40
16. 17	47. 25
16. 54	53. 40
17. 21	49. 55
	***
18. 4	47. 20
18. 58	47. 25
	***
20. 40	46. 10
21. 35	46. 55
	***
22. 23	48. 40
23. 15	50. 5
23. 27	51. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 20 h m	
10. 58	·1098
11. 16	·1095
11. 58	·1096
12. 8	·1098
12. 48	·1097
13. 31	·1100
15. 30	·1104
15. 53	·1104
16. 46	·1105
17. 9	·1105
19. 2	·1102
20. 37	·1100
21. 8	·1097
22. 5	·1093
22. 23	·1094
22. 44	·1092
23. 21	·1092
23. 59	·1094
Jan. 21	
0. 0	·1094
0. 43	·1096
1. 33	·1095
1. 58	·1101
2. 38	·1101
2. 45	·1098
2. 53	·1099
2. 55	·1093
3. 7	·1090
3. 27	·1093
5. 0	·1092
5. 5	·1104
5. 38:	·1092
6. 2	·1097
6. 16	·1097
6. 36	·1100
7. 4	·1095
7. 47	·1093
7. 54	·1097
8. 0	·1094
8. 32	·1093
9. 23	·1091
9. 32	·1092
9. 53	·1086
10. 10	·1091
10. 17	·1082
10. 26	·1088
10. 37	·1087
11. 13	·1088
11. 31	·1093
12. 8	·1093
13. 13	·1095
13. 40	·1094
13. 46	·1088
13. 54	·1092
14. 7	·1090
14. 37	·1092
14. 44	·1087

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 21	
0. 0	·01620
1. 48	·01640
2. 48	·01563
3. 40	·01470
4. 30	·01335
5. 56	·01207
7. 2	·01170
	·01285
11. 38:	·01227
16. 45	·01347
21. 27	·01350
23. 13	·01390
23. 59	·01400

Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	(Of V. F. Magnet.)
h m	°	°
Jan. 21		
0. 0	45 ·0	45 ·0
1. 0	46 ·0	46 ·3
2. 0	47 ·3	47 ·5
3. 0	48 ·9	49 ·4
6. 0	50 ·7	50 ·7
9. 0	50 ·5	50 ·8
12. 0	49 ·1	49 ·0
21. 0	49 ·0	49 ·5
22. 0	50 ·0	50 ·5
23. 0	50 ·4	51 ·0

Greenwich Mean Solar Time.	Western Declination.
Jan. 21 h m	° ′ ″
23. 54	20. 50. 0
23. 59	51. 15
Jan. 22	
0. 0	20. 51. 15
0. 11	53. 30
0. 26	51. 20
0. 48	50. 55
1. 7	52. 50
1. 33	53. 20
2. 0	50. 45
2. 52	50. 25
4. 29	48. 20
5. 51	47. 55
6. 3	48. 35
6. 22	47. 45
6. 38	48. 55
7. 22	47. 55
8. 14	47. 30
9. 26	48. 5
10. 8	47. 30
15. 30	49. 20
19. 31	48. 15
19. 43	46. 40
19. 51	48. 20
19. 57	47. 25
20. 21	47. 25
20. 27	45. 35
20. 37	47. 10
21. 32	47. 15
22. 25	48. 0
	(†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 21 h m	
14. 51	·1091
14. 56	·1089
15. 51	·1094
16. 29	·1088
16. 42	·1093
17. 43	·1101
18. 22	·1093
19. 17	·1090
19. 37	·1091
19. 38	·1085
	***
20. 54	·1085
21. 11	·1083
22. 30	·1077
22. 40	·1077
23. 2	·1072
23. 12	·1076
23. 46	·1071
23. 59	·1077
Jan. 22	
0. 0	·1077
0. 3	·1078
0. 25	·1068
0. 38	·1066
0. 43	·1066
2. 48	·1078
3. 34	·1078
3. 42	·1080
5. 3	·1078
5. 34	·1080
6. 9	·1075
6. 29	·1080
7. 15	·1075
7. 37	·1078
8. 0	·1073
8. 32	·1075
8. 57	·1079
9. 8	·1077
9. 30	·1086
9. 38	·1075
10. 29	·1080
10. 37	·1078
11. 2	·1081
11. 46	·1078
12. 4	·1084
12. 16	·1080
12. 23	·1082
12. 32	·1077
12. 40	·1081
12. 46	·1075
13. 0	·1080
13. 10	·1075
13. 50	·1081
14. 7	·1079
14. 16	·1080
18. 14	·1083
18. 58	·1086

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Jan. 22	
0. 0	·01400
2. 29	·01290
2. 55	·01260
4. 41	·01217
9. 39	·01155
12. 26	·01150
18. 3	·01277
20. 39	·01300
23. 12	·01380
23. 59	·01360

Greenwich Mean Solar Time.	Readings of Thermometers. (Of H. F. Magnet.)	(Of V. F. Magnet.)
h m	°	°
Jan. 22		
0. 0	51 ·5	52 ·2
1. 0	52 ·5	52 ·8
3. 0	54 ·9	54 ·0
9. 0	55 ·8	54 ·9
21. 0	53 ·2	52 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Jan. 23	
0. 0	20. 48. 5
0. 37	50. 10
4. 6	48. 15
6. 7	48. 45
6. 37	48. 0
7. 5	48. 40
7. 37	47. 55
7. 57	48. 40
8. 8	47. 50
9. 3	47. 35
9. 24	49. 20
9. 50	43. 0
10. 0	44. 20
10. 36	43. 45
11. 9	47. 5
11. 21	44. 35
11. 28	46. 5
11. 39	43. 50
11. 53	44. 25
12. 26	41. 55
12. 47	41. 55
13. 53	49. 5
14. 10	44. 30
	***
14. 56	40. 55
15. 49	45. 45
15. 58	44. 35
16. 8	47. 40
16. 21	41. 50
17. 3	48. 30
17. 27	48. 5
17. 42	49. 40
18. 3	48. 5
18. 25	49. 45
19. 7	50. 45
19. 13	51. 50
19. 26	49. 15
19. 58	55. 0
20. 44	51. 40
21. 22	51. 0
22. 48	52. 15
23. 8	53. 45
23. 22	53. 30
23. 49	55. 30
23. 59	54. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 22 h m	
19. 44	·1084
19. 52	·1088
20. 1	·1086
20. 29	·1085
20. 37	·1089
21. 23	·1089
22. 22	·1084
23. 59	·1083
Jan. 23	
0. 0	·1083
0. 7	·1083
0. 45	·1082
	***
2. 13	·1091
	***
4. 4	·1096
4. 32	·1101
4. 58	·1100
5. 52	·1101
5. 57	·1104
6. 23	·1100
6. 54	·1101
7. 41	·1101
7. 52	·1106
8. 9	·1102
8. 24	·1101
8. 31	·1098
8. 59	·1100
9. 32	·1096
9. 56	·1103
10. 4	·1097
10. 22	·1094
10. 34	·1088
10. 54	·1091
11. 13	·1080
11. 32	·1078
11. 58	·1092
12. 13	·1082
12. 36	·1078
12. 57	·1082
13. 30	·1076
13. 52	·1081
14. 7	·1078
14. 17	·1089
14. 27	·1090
14. 34	·1086
14. 43	·1087
14. 52	·1083
15. 4	·1087
15. 35:	·1084
16. 23	·1093
16. 56	·1092
17. 7	·1096
17. 17	·1094
17. 29	·1098
17. 56	·1099
18. 22	·1094

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 23 h m	
0. 0	·01360
0. 29	·01375
1. 15	·01330
2. 4	·01330
3. 22	·01280
4. 45	·01155
5. 52	·01150
	·01275
7. 28	·01235
9. 45	·01250
13. 20	·01420
14. 12	·01430
15. 50	·01540
21. 14	·01535
22. 30	·01555
22. 45	·01565
23. 59	·01575

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 23 h m	°	°
1. 0	54·0	54·0
3. 0	54·7	54·7
9. 0	53·8	53·0
21. 0	46·6	47·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Jan. 24	
0. 0	20. 54. 35
0. 21	53. 50
0. 26	55. 5
0. 37	54. 10
1. 21	54. 30
1. 37	53. 10
2. 37	55. 15
3. 13	49. 0
3. 26	50. 25
4. 14	51. 35
4. 42	50. 25
5. 23	52. 55
5. 36	51. 30
5. 52	51. 45
6. 11	48. 25
6. 22	49. 10
6. 28	52. 40
6. 36	53. 0
6. 38	52. 5
6. 45	56. 0
6. 53	51. 45
6. 57	53. 45
7. 4	20. 52. 5
7. 10	21. 7. 30
7. 31	20. 49. 45
7. 42	56. 55
8. 2	48. 15
8. 8	49. 25
8. 24	43. 40
8. 37	47. 20
8. 50	42. 20
9. 1	39. 30
9. 21	50. 30
9. 26	47. 15
9. 27	58. 20
9. 37	47. 10
9. 44	57. 20
9. 58	42. 55
10. 5	56. 10
10. 15	44. 0
10. 25	31. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 23 h m	
18. 52	·1099
18. 57	·1097
19. 7	·1098
19. 12	·1091
19. 29	·1097
19. 33	·1095
20. 10	·1099
20. 32	·1097
21. 8	·1096
22. 10	·1094
22. 39	·1089
22. 57	·1090
	***
23. 55	·1069
	(†)
Jan. 24	
	(†)
0. 27	·1073
0. 30	·1077
0. 37	·1075
0. 39	·1081
0. 51	·1082
1. 3	·1087
1. 24	·1087
2. 7	·1103
2. 23	·1110
2. 53	·1094
3. 28	·1110
4. 14	·1111
4. 45	·1103
5. 3	·1105
5. 19	·1101
5. 30	·1101
5. 40	·1109
6. 10	·1078
6. 23	·1082
6. 35	·1094
6. 41	·1082
6. 48	·1089
6. 52	·1074
7. 2	·1090
7. 7	·1087
7. 15	·1104
7. 26	·1084
7. 44	·1081
8. 0	·1065
8. 8	·1066
8. 24	·1064
8. 29	·1069
8. 35	·1061
8. 45	·1056
9. 0	·1059
9. 16	·1073
9. 27	·0971
9. 37	·1006
9. 43	·0968
10. 0	·1045

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 24 h m	
0. 0	·01575
2. 49	·01500
4. 44	·01347
6. 6	·01300
6. 47	·01330
7. 47	·01323
9. 10	·01263
9. 33	·01143
9. 45	·00960
10. 5	·01075
10. 14	·00955
10. 23	·00940
10. 35	·01010
10. 44	·00995
11. 15	·01076
11. 37:	·01060
12. 3:	·01132
12. 15	·01065
12. 35	·01212
12. 40	·01200
12. 56	·01267
13. 2	·01260
13. 8	·01290
15. 0	·01257
15. 44	·01296
16. 2	·01290
16. 27:	·01326
17. 12	·01214
17. 24	·01218
17. 49	·01137
18. 39:	·01280
20. 38	·01417
23. 59	·01550

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 24 h m	°	°
1. 0	49·0	49·2
3. 0	50·5	50·8
9. 0	50·5	49·9
22. 35	45·0	45·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 24		Jan. 24						
h m	° ′ ″	h m		h m		h m	°	°
10. 27	20. 37. 50	10. 1	·1014					
10. 38	28. 35	10. 6	·1017					
10. 40	29. 25	10. 10	·1010					
10. 52	23. 50	10. 19	·1072					
11. 11	34. 25	10. 24	·1054					
11. 25	31. 40	10. 31	·1062					
11. 39	31. 0	10. 38	·1058					
11. 47	34. 35	10. 52	·1071					
11. 56	35. 0	11. 15	·1034					
12. 1	38. 30	11. 24	·1031					
12. 9	33. 5	11. 34	·1037					
12. 14	32. 50	11. 37	·1034					
12. 22	29. 15	11. 52	·1059					
12. 28	34. 40	11. 53	·1038					
12. 41	49. 45	12. 17	·1105					
12. 57	35. 0	12. 39	·1037					
13. 9	42. 10	12. 52	·1064					
13. 15	41. 20	12. 54	·1056					
13. 28	45. 40	13. 7	·1069					
13. 39	44. 20	13. 15	·1061					
13. 54	47. 15	13. 33	·1053					
14. 17	45. 25	13. 48	·1055					
14. 22	44. 10	13. 51	·1051					
14. 24	44. 55	14. 2	·1064					
14. 39	42. 40	14. 7	·1060					
14. 45	44. 30	14. 10	·1056					
14. 56	40. 45	14. 24	·1071					
15. 12	38. 45	14. 31	·1067					
15. 19	40. 50	14. 37	·1069					
15. 37	35. 30	14. 45	·1065					
15. 53	42. 40	14. 51	·1063					
16. 0	37. 15	15. 4	·1068					
16. 7	38. 10	15. 10	·1073					
16. 10	36. 25	15. 31	·1077					
16. 29	37. 35	15. 38	·1076					
16. 41	42. 0	15. 47	·1082					
16. 50	20. 41. 30	15. 59	·1080					
17. 6	21. 0. 0	16. 4	·1083					
17. 13	20. 57. 5	16. 8	·1075					
17. 19	59. 35	16. 34	·1081					
17. 26	57. 45	17. 2	·1062					
17. 37	50. 35	17. 22	·1117					
17. 41	50. 20	17. 25	·1114					
17. 53	46. 45	17. 32	·1119					
18. 2	48. 5	17. 37	·1115					
18. 7	46. 25	17. 40	·1113					
18. 12	48. 20	17. 46	·1109					
18. 18	46. 15	17. 49	·1110					
18. 25	49. 10	18. 7	·1083					
18. 34	46. 5	18. 14	·1072					
18. 39	50. 0	18. 20	·1077					
18. 47	48. 0	18. 23	·1071					
	***	18. 30	·1080					
19. 46	48. 5	18. 35	·1069					
	***	18. 44	·1083					
21. 21	51. 55	18. 53	·1075					
	***	18. 56	·1079					
22. 55	52. 35	19. 1	·1076					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 24		Jan. 24						
h m	° ′ ″	h m		h m		h m	°	°
23. 48	20. 53. 30	19. 5	·1081					
23. 59	53. 10	19. 18	·1080					
		19. 24	·1085					
		19. 34	·1082					
		19. 57	·1084					
		20. 5	·1080					
		20. 10	·1087					
		20. 14	·1081					
		20. 20	·1085					
		20. 23	·1082					
		20. 27	·1085					
		20. 48	·1082					
		20. 53	·1080					
		21. 10	·1084					
		21. 14	·1080					
		21. 23	·1083					
		21. 24	·1078					
		22. 6	·1081					
		22. 24	·1086					
		22. 42	·1084					
		23. 15	·1086					
		23. 51	·1091					
		23. 59	·1089					
Jan. 25		Jan. 25		Jan. 25		Jan. 25		
0. 0	20. 53. 10	0. 0	·1089	0. 0	·01550	9. 0	48 ·2	49 ·0
0. 19	53. 15	0. 8	·1093	1. 26	·01596	21. 0	47 ·0	47 ·5
0. 44	58. 35	0. 21	·1094	2. 10	·01632			
1. 20	57. 5	0. 33	·1104	2. 21	·01650			
1. 39	56. 50	0. 38	·1100	2. 32	·01658			
2. 1	58. 0	0. 45	·1105	2. 52	·01640			
2. 12	59. 25	0. 59	·1095	7. 45	·01514			
2. 22	55. 10	1. 7	·1101	9. 25	·01510			
2. 36	55. 55	1. 38	·1056	9. 38	·01500			
2. 48	53. 45	2. 13	·1090	9. 52	·01524			
3. 10	51. 20	2. 27	·1075	10. 34	·01457			
3. 23	53. 5	2. 38	·1092	10. 45	·01460			
3. 54	54. 30	2. 52	·1080	11. 24	·01426			
5. 13	52. 55	3. 16	·1091	11. 36	·01390			
5. 27	53. 40	3. 20	·1088	13. 15	·01373			
5. 47	52. 20	3. 28	·1095	13. 32	·01350			
6. 12	51. 50	3. 37	·1093	14. 17	·01348			
6. 29	52. 45	4. 27	·1103	15. 1	·01400			
6. 58	52. 50	4. 38	·1101	21. 54	·01428			
7. 8	54. 40	4. 50	·1105	23. 55	·01518			
7. 53	47. 50	5. 5:	·1095	23. 59	·01510			
8. 22	47. 25	5. 26	·1104					
8. 34	48. 40	5. 35	·1102					
9. 0	47. 40	5. 47	·1106					
9. 14	43. 55	6. 1	·1104					
9. 28	37. 35	6. 12	·1105					
9. 46	20. 25	6. 23	·1086					
10. 2	34. 50	6. 30	·1094					
10. 13	35. 55	6. 39	·1087					
10. 35	35. 40	6. 53	·1098					
10. 51	44. 15	7. 0	·1095					
11. 7	43. 35	7. 8	·1101					
11. 30	45. 20	7. 17	·1089					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Jan. 25 h m	° ′ ″
11. 53	20. 35. 30
12. 3	35. 50
12. 23	32. 25
13. 2	44. 40
13. 16	46. 35
13. 21	48. 50
13. 31	41. 30
14. 1	37. 25
14. 23	38. 20
14. 58	47. 55
15. 28	46. 40
15. 51	48. 30
16. 7	47. 0
16. 46	49. 45
	***
17. 54	50. 50
18. 8	49. 10
18. 27	50. 0
19. 10	48. 45
19. 27	49. 45
19. 54	49. 20
20. 24	51. 55
20. 40	50. 55
21. 1	56. 0
21. 25	20. 57. 50
21. 46	21. 0. 5
21. 53	20. 58. 5
22. 9	21. 1. 30
22. 32	20. 56. 5
22. 42	58. 10
22. 55	54. 40
23. 12	59. 10
23. 27	53. 45
23. 41	57. 35
23. 47	54. 40
23. 52	58. 5
23. 56	54. 55
23. 59	56. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 25 h m	
7. 25	·1092
7. 32	·1078
7. 38	·1088
7. 53	·1081
	***
8. 32	·1087
9. 31	·1055
9. 52	·1101
10. 0	·1088
10. 15	·1089
10. 27	·1063
10. 37	·1071
10. 52	·1074
11. 14	·1074
11. 23	·1090
11. 35	·1084
11. 48	·1094
11. 59	·1090
12. 15	·1095
12. 31	·1081
12. 56	·1074
13. 4	·1079
13. 9	·1103
13. 49	·1074
13. 52	·1075
14. 3	·1058
14. 9	·1060
14. 15	·1057
14. 35	·1069
14. 45	·1087
15. 4	·1078
15. 40	·1083
15. 53	·1080
	***
16. 56	·1084
17. 2	·1081
17. 11	·1085
17. 37	·1085
17. 44	·1082
18. 9	·1090
18. 13	·1088
18. 39	·1090
18. 46	·1085
19. 13	·1092
19. 41	·1085
19. 59	·1086
20. 12	·1076
20. 22	·1074
20. 30	·1076
20. 49	·1056
21. 2	·1056
21. 20	·1073
21. 44	·1057
22. 18	·1076
22. 29	·1073
22. 48	·1077
22. 54	·1071
23. 1	·1074

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
Jan. 26 h m	° ′ ″
0. 0	20. 56. 30
0. 4	20. 59. 40
0. 11	21. 2. 50
0. 21	0. 45
0. 26	6. 5
0. 29	3. 55
0. 33	7. 30
	***
0. 50	21. 3. 5
	***
1. 0	20. 56. 55
1. 4	58. 40
1. 8	54. 0
1. 19	52. 5
1. 31	20. 54. 40
1. 38	21. 2. 35
1. 45	20. 56. 35
1. 56	21. 3. 55
2. 9	0. 35
2. 15	21. 7. 0
2. 30	20. 52. 40
	***
2. 52	45. 55
3. 0	48. 55
3. 5	48. 10
3. 10	53. 0
3. 21	50. 10
3. 36	56. 0
3. 45	52. 50
3. 51	54. 25
4. 0	52. 25
4. 8	54. 10
	***
4. 27	53. 30
4. 37	54. 25
4. 54	52. 45
5. 5	54. 10
5. 15	52. 0
5. 28	55. 15
5. 42	52. 25
5. 51	53. 20
6. 8	41. 25
6. 20	48. 30
6. 28	38. 5
6. 33	45. 30
6. 37	39. 20
6. 51	32. 30
6. 57	39. 55
7. 7	41. 55
7. 15	38. 15
7. 28	39. 45
7. 38	46. 10
7. 41	45. 0
7. 50	46. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 25 h m	
23. 15	·1071
23. 59	·1076
Jan. 26	
0. 0	·1076
0. 10	·1068
0. 16	·1075
0. 25	·1077
0. 31	·1074
0. 36	·1081
0. 42	·1073
0. 45	·1076
0. 49	·1066
0. 52	·1073
1. 2	·1068
1. 10	·1048
1. 35	·1077
1. 42	·1058
1. 51	·1073
2. 2	·1058
2. 15	·1073
2. 20	·1037
2. 44	·1051
2. 50	·1059
3. 7	·1060
3. 14	·1052
3. 22	·1063
3. 37	·1048
3. 53	·1056
3. 57	·1048
4. 14	·1054
4. 25	·1044
4. 47	·1043
4. 56	·1050
5. 8	·1047
5. 17	·1051
5. 24	·1048
5. 42	·1045
5. 48	·1049
5. 59	·1046
6. 12	·1061
6. 21	·1048
6. 29	·1078
6. 33	·1051
6. 44	·1051
6. 56	·1080
7. 13	·1058
7. 23	·1060
7. 29	·1056
7. 37	·1061
7. 59	·1048
8. 8	·1052
8. 23	·1039
8. 37	·1051
8. 39	·1074
8. 47	·1056
8. 59	·1067
9. 7	·1067

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 26 h m	
0. 0	·01510
1. 35	·01580
2. 0	·01560
2. 10	·01620
2. 45	·01637
4. 19	·01488
5. 41	·01420
5. 53	·01428
6. 7	·01404
6. 15	·01410
6. 30:	·01357
6. 42	·01344
7. 0	·01305
8. 34	·01273
9. 22	·01230
9. 35	·01230
10. 12	·01165
10. 25	·01190
10. 43	·01179
12. 0	·01246
13. 40	·01264
14. 30:	·01217
15. 41	·01257
18. 19	·01250
23. 0	·01120
23. 59	·01133

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Jan. 26		
1. 0	49 ·5	49 ·5
3. 0	51 ·0	50 ·7
9. 0	51 ·6	50 ·8
21. 10	52 ·2	53 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 26		Jan. 26						
h m	° ′ ″	h m		h m		h m	°	°
7. 57	20. 44. 5	9. 18	·1055					
8. 6	46. 10	9. 46	·1079					
8. 15	45. 50	10. 15	·1053					
8. 23	41. 20	10. 25	·1088					
8. 36	31. 5	10. 41	·1065					
8. 38	38. 55		***					
8. 48	38. 0	11. 54	·1063					
9. 13	48. 5	12. 30:	·1070					
9. 26	44. 15	13. 2	·1066					
9. 38	46. 0	13. 26	·1073					
10. 3	53. 15	13. 33	·1072					
10. 24	43. 5	13. 45	·1077					
10. 38	48. 25	13. 55	·1078					
10. 54	42. 50	14. 1	·1075					
11. 16	44. 0	14. 29	·1081					
11. 37	47. 25	14. 56	·1078					
13. 6	48. 50	15. 10	·1074					
13. 28	51. 5	15. 32	·1074					
13. 51	59. 40	15. 46	·1073					
14. 47	48. 45	15. 56	·1068					
15. 20	48. 20	16. 43	·1067					
16. 1	52. 5	17. 5	·1072					
	***	17. 14	·1068					
17. 2	52. 5	17. 31	·1075					
	***	17. 46	·1075					
17. 42	50. 10	17. 53	·1072					
17. 51	51. 50	18. 19	·1077					
18. 7	50. 10	18. 30	·1074					
	***	19. 33	·1072					
18. 25	51. 5	19. 47	·1066					
	***	19. 52	·1070					
18. 50	48. 40	20. 7	·1073					
	***	20. 9	·1068					
19. 32	49. 30	20. 22	·1072					
19. 39	50. 55	20. 31	·1066					
19. 53	49. 50	20. 37	·1068					
20. 0	50. 55	20. 52	·1061					
	***	21. 29	·1060					
20. 51	50. 30	21. 37	·1063					
	***	21. 52	·1059					
21. 39	52. 35	22. 2	·1064					
	***	22. 26	·1067					
22. 2	51. 15	22. 38	·1066					
	***	22. 55	·1071					
22. 44	53. 50	23. 8	·1066					
22. 55	57. 40	23. 24	·1072					
23. 14	52. 55	23. 32	·1067					
23. 38	52. 30	23. 39	·1074					
23. 41	53. 45	23. 59	·1071					
23. 59	53. 40							
Jan. 27		Jan. 27		Jan. 27		Jan. 27		
0. 0	20. 53. 40	0. 0	·1071	0. 0	·01133	1. 0	53·0	53·5
0. 9	57. 25	0. 8	·1079	0. 15	·01080	3. 0	53·6	53·9
0. 18	55. 40	0. 28	·1067	1. 33	·01080	9. 0	52·2	52·0
0. 23	57. 55	0. 46	·1073	2. 5	{·01103	21. 0	44·0	44·5
0. 24	53. 25	1. 8	·1070		{·01180	22. 0	44·5	44·8
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 27		Jan. 27		Jan. 27		Jan. 27		
h m	° ′ ″	h m		h m		h m	°	°
0. 47	20. 54. 55	1. 25	·1071	3. 0	{·01146	23. 0	46·0	46·0
0. 54	56. 50	1. 40	·1060		{·01420			
1. 27	56. 35	1. 45	·1061	4. 25	{·01370			
1. 39	54. 5	2. 9	·1050		{·01480			
2. 15	53. 55	2. 18	·1058	6. 45	·01420			
2. 43	56. 10	2. 26	·1058	8. 45	·01445			
2. 58	54. 55	2. 44	·1070	9. 18	·01443			
3. 7	56. 20	2. 48	·1064	9. 45	·01417			
3. 15	52. 15	3. 17	·1062	19. 41	·01453			
3. 27	51. 5	3. 38	·1073	22. 11	·01487			
3. 36	52. 10	4. 0	·1048	23. 59	·01540			
3. 40	51. 0	4. 22	·1068					
3. 53	51. 45	4. 30	·1067					
4. 9	44. 45	4. 38	·1072					
4. 27	46. 30	5. 10	·1061					
4. 58	51. 5	5. 23	·1065					
5. 10	49. 55	5. 40	·1058					
5. 26	50. 55	5. 53	·1075					
5. 39	44. 15	6. 12	·1066					
5. 52	47. 5	6. 25	·1081					
6. 5	46. 50	6. 59	·1068					
6. 11	44. 10	7. 53	·1070					
6. 24	46. 40	8. 7	·1065					
6. 33	46. 55	8. 16	·1065					
6. 51	49. 30	8. 29	·1060					
7. 0	49. 0	9. 0	·1062					
7. 47	48. 40	9. 22	·1095					
8. 2	49. 30	9. 41	·1065					
8. 17	48. 25	9. 59	·1075					
8. 38	45. 45	10. 17	·1063					
8. 49	47. 35	10. 26	·1065					
8. 58	46. 5	10. 45	·1063					
9. 11	35. 40	11. 3	·1065					
9. 34	43. 50	11. 38	·1062					
9. 48	36. 0	11. 44	·1067					
10. 4	35. 15	11. 58	·1062					
10. 41	45. 0	12. 37:	·1069					
11. 3	43. 5	13. 8	·1065					
	***	13. 29	·1070					
11. 53	45. 15	13. 44	·1068					
12. 4	44. 10	14. 0	·1073					
12. 28	46. 30	14. 26	·1067					
13. 8	49. 5	15. 0	·1067					
13. 24	47. 55	15. 30	·1073					
13. 37	48. 55	15. 58	·1075					
15. 54	47. 50	16. 32	·1075					
16. 31	49. 55	16. 52	·1073					
16. 55	47. 45	16. 57	·1067					
18. 51	48. 50	18. 25	·1069					
	***	19. 14	·1071					
19. 58	48. 5	20. 3	·1061					
	***	20. 10	·1063					
21. 22	46. 10	21. 26	·1066					
21. 32	47. 50	21. 38	·1063					
21. 41	47. 15	21. 46	·1066					
22. 48	53. 50	22. 0	·1064					
23. 8	55. 25	22. 13	·1065					
23. 23	54. 45		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 27		Jan. 27						
h m	° ′ ″	h m		h m		h m	°	°
23. 40	20. 56. 30	23. 10	·1061					
23. 59	55. 0	23. 18	·1064					
		23. 59	·1064					
Jan. 28		Jan. 28		Jan. 28		Jan. 28		
0. 0	20. 55. 0	0. 0	·1064	0. 0	·01540	0. 0	46·5	46·8
0. 10	53. 50	0. 8	·1064	2. 0	·01585	1. 0	47·0	47·2
0. 40	54. 55	0. 20	·1069	3. 28:	·01510	2. 0	47·8	48·0
1. 7	53. 35	0. 28	·1065	4. 29	·01418	3. 0	48·5	48·8
1. 14	52. 30	0. 45	·1068	7. 8	·01185	6. 0	51·0	50·6
1. 19	53. 25	1. 28	·1066	9. 4	·01155	9. 0	50·1	49·4
2. 5	51. 50	1. 41	·1067	9. 27	·01180	12. 0	48·7	48·2
3. 17	49. 45	2. 12	·1073	10. 15	·01165	18. 0	46·9	47·7
3. 39	50. 55	2. 53	·1070	12. 21	·01180	21. 0	47·7	48·6
3. 50	49. 40	2. 54	·1063	12. 33	·01207	22. 0	48·2	48·0
4. 1	50. 25	3. 35	·1064	13. 15:	·01166	23. 0	49·0	49·3
4. 44	49. 0	3. 40	·1070	14. 22	·01230			
5. 14	49. 30	3. 54	·1064	17. 35	·01340			
5. 50	48. 55	4. 18	·1066	18. 40	·01348			
	***	4. 28	·1064	20. 15	·01390			
6. 41	51. 10	4. 48	·1068	22. 4	·01417			
7. 8	48. 55	5. 8	·1069	22. 52	·01410			
7. 32	49. 20	5. 16	·1072	23. 59	·01365			
7. 44	48. 30	5. 38	·1068					
8. 9	48. 15	5. 55	·1073					
8. 33	48. 0	6. 43	·1073					
8. 41	49. 5	6. 56:	·1065					
9. 0	46. 25	7. 15	·1068					
9. 12	46. 35	7. 31	·1070					
9. 23	34. 55	7. 39	·1069					
9. 30	37. 0	8. 2	·1073					
9. 41	37. 0	8. 30	·1063					
10. 0	44. 30	8. 40	·1067					
10. 30	43. 10	9. 8	·1053					
10. 52	46. 15	9. 33	·1070					
11. 33	47. 30	9. 40	·1066					
11. 52	46. 25	9. 50	·1072					
12. 9	47. 55	10. 16	·1057					
12. 25	45. 45		***					
12. 39	53. 5	12. 9	·1069					
13. 22	45. 0	12. 22	·1063					
13. 55	44. 40	12. 41	·1093					
14. 24	48. 15	12. 58	·1078					
15. 41	46. 45	13. 22	·1062					
16. 9	47. 15	13. 31	·1062					
17. 0	46. 25	13. 45	·1058					
17. 14	47. 35	14. 15	·1064					
17. 33	46. 40	14. 32	·1065					
17. 48	48. 30	14. 45	·1064					
17. 56	48. 15		***					
18. 7	49. 30	17. 30	·1064					
18. 16	48. 20	17. 49	·1072					
	***	17. 59	·1071					
18. 43	46. 35	18. 13	·1076					
18. 54	47. 20		***					
18. 58	46. 15	18. 37	·1076					
	***	19. 2	·1067					
19. 39	47. 20	19. 41	·1070					
	***	19. 43	·1062					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 28		Jan. 28						
h m	° ′ ″	h m		h m		h m	°	°
20. 53	20. 46. 5	20. 18	·1063					
21. 38	47. 10	20. 25	·1065					
	***	20. 37	·1063					
22. 59	51. 20	21. 38	·1060					
23. 11	50. 35	22. 14	·1059					
23. 20	51. 55	22. 57	·1056					
23. 42	51. 30	23. 6	·1053					
23. 59	52. 5	23. 14	·1055					
		23. 20	·1053					
		23. 59	·1053					
Jan. 29		Jan. 29		Jan. 29		Jan. 29		
0. 0	20. 52. 5	0. 0	·1053	0. 0	·01365	0. 0	51·0	50·7
0. 48	55. 0	0. 14	·1054	1. 31	·01322	1. 0	51·5	51·8
1. 0	54. 50	0. 29	·1057	1. 41	·01325	3. 0	53·1	53·3
1. 9	55. 20		†)	2. 52	·01280	9. 0	54·7	54·1
1. 30	54. 45	1. 0	·1064*	3. 38	·01327	21. 0	52·0	52·3
1. 43	58. 25	1. 2	·1057	4. 0	·01420			
2. 6	55. 0	1. 20	·1060	5. 0	·01320			
	***	1. 24	·1062	5. 44	·01293			
2. 54	20. 56. 5	1. 33	·1067	6. 3	·01277			
	***	1. 49	·1057	6. 12	·01280			
3. 32	21. 0. 35	2. 36	·1056	6. 26	·01265			
3. 47	20. 53. 30	2. 52	·1051	7. 26	·01260			
3. 54	40. 30	3. 1	·1052	7. 49	·01287			
4. 0	42. 0	3. 30	·1028	8. 8	·01245			
4. 8	38. 10	3. 35	·1029	8. 57	·01188			
4. 18	44. 45	3. 52	·1046	9. 10	·01200			
4. 27	49. 5	3. 55	·1044	9. 45	·01167			
4. 34	48. 50	4. 6	·1052	10. 45	·01195			
4. 54	53. 15	4. 30	·1043	10. 57	·01180			
5. 0	51. 50	4. 37	·1044	12. 4	·01197			
5. 7	53. 25	4. 51	·1039	12. 25	·01180			
5. 23	46. 20	4. 54	·1041	13. 15	·01212			
5. 33	48. 15	5. 7	·1037	13. 58	·01212			
5. 47	54. 55	5. 20	·1047	14. 30	·01180			
5. 58	56. 25	5. 27	·1046	15. 3	·01130			
6. 0	50. 15	5. 38	·1051	15. 55	·01150			
6. 20	53. 55	5. 58	·1034	16. 50	·01205			
6. 30	47. 30	6. 8	·1054	21. 54	·01320			
6. 43	57. 55	6. 16	·1038	23. 59	·01327			
6. 52	57. 10	6. 31	·1063					
6. 58	58. 30	6. 57	·1044					
7. 8	20. 54. 30	7. 8	·1047					
7. 21	21. 2. 5	7. 28	·1016					
7. 38	20. 53. 45	7. 39	·1028					
7. 41	55. 0	8. 2	·1017					
7. 53	38. 30		***					
8. 5	51. 20	8. 27	·1027					
8. 9	42. 35	8. 54	·1018					
8. 15	42. 15	9. 2	·1022					
8. 27	35. 20	9. 12	·1019					
8. 55	42. 0	9. 23	·1024					
9. 2	41. 25	9. 42	·1016					
9. 8	42. 50	10. 10	·1030					
9. 32	43. 10	10. 29	·1027					
9. 39	44. 35	10. 45	·1046					
9. 54	42. 5	10. 56	·1044					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Jan. 29		Jan. 29						
h m	° ′ ″	h m		h m		h m	°	°
10. 12	20. 45. 5	11. 8	·1036					
	***	11. 43	·1026					
10. 37	44. 15	12. 5	·1039					
10. 45	47. 20	12. 21	·1033					
10. 53	44. 20	12. 51	·1033					
11. 2	44. 25	13. 24	·1042					
11. 20	38. 35	13. 43	·1040					
11. 44	35. 15	14. 7	·1048					
12. 8	42. 25	14. 32	·1070					
12. 19	42. 40	14. 59:	·1056					
12. 30	40. 25	15. 17	·1064					
12. 38	42. 35	15. 53	·1041					
12. 45	42. 55		***					
13. 21	48. 55	16. 55	·1049					
13. 38	46. 50	17. 10	·1054					
13. 52	46. 55	17. 25	·1054					
14. 38	53. 50	17. 32	·1051					
15. 15	45. 30	18. 0	·1054					
15. 38	51. 35	18. 15	·1050					
16. 7	46. 25	18. 46	·1048					
16. 20	47. 15	19. 2	·1052					
16. 36	46. 30	19. 8	·1049					
16. 48	48. 5	19. 25	·1055					
17. 6	46. 45	20. 10	·1052					
17. 26	48. 0	20. 22	·1048					
17. 38	47. 0	20. 47	·1052					
	***	21. 22	·1047					
18. 17	47. 10	22. 13	·1046					
18. 45	49. 0		***					
18. 57	48. 15	23. 13	·1050					
19. 7	49. 55	23. 59	·1045					
19. 20	48. 15							
	***							
20. 36	46. 30							
	***							
21. 29	46. 10							
	***							
22. 28	48. 25							
22. 33	49. 40							
	***							
23. 14	53. 0							
23. 34	51. 15							
	***							
23. 59	51. 30							
Jan. 30		Jan. 30		Jan. 30		Jan. 30		
0. 0	20. 51. 40	0. 0	·1045	0. 0	·01327	1. 0	53	·953 ·4
0. 27	53. 55	0. 26	·1052	2. 8	·01360	3. 0	54	·454 ·0
1. 2	54. 50	0. 43	·1049	2. 32	·01366	9. 0	55	·454 ·8
1. 14	54. 5	0. 46	·1051	6. 58	·01260	21. 0	52	·352 ·6
1. 38	56. 5	1. 2	·1050	7. 23	·01265			
2. 7	53. 40	1. 27	·1055	9. 17	·01240			
2. 35	54. 20	1. 38	·1056	10. 40	·01225			
3. 48	51. 25	2. 16	·1055	11. 42	·01257			
4. 14	51. 50	2. 50	·1054	12. 40	·01182			
4. 37	50. 25	3. 42	·1061	13. 53	·01156			
6. 8	50. 45	3. 53	·1050	14. 10:	·01080			
6. 53	52. 40	4. 8	·1060	14. 30	·01112			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Jan. 30		Jan. 30		Jan. 30				
h m	° ′ ″	h m		h m		h m	°	°
7. 22	20. 49. 10	4. 37	·1058	15. 15:	·01088			
7. 48	50. 30		***	16. 5	·01133			
8. 23	48. 35	5. 52	·1062	16. 45	·01130			
9. 54	46. 30	6. 8	·1068	17. 7	·01147			
10. 19	46. 35	6. 26	·1065	21. 29	·01280			
10. 41	43. 15	6. 44	·1058	21. 45	·01293			
10. 57	45. 0	6. 50	·1062	23. 59	·01337			
11. 19	47. 50	7. 7	·1049					
11. 31	51. 55	7. 22	·1047					
11. 55	45. 55	7. 31	·1052					
12. 11	48. 50	7. 58	·1053					
12. 36	46. 45	8. 13	·1050					
12. 53	47. 35	8. 27	·1055					
13. 31	40. 0		***					
13. 52	55. 50	8. 45	·1051					
14. 20	38. 15	8. 53	·1055					
14. 33	41. 55	9. 15	·1049					
15. 13	38. 20	9. 32	·1046					
15. 42	42. 35	9. 42	·1051					
16. 4	41. 55	9. 59	·1050					
16. 15	46. 40	10. 4	·1053					
16. 22	44. 0	10. 20	·1051					
16. 38	49. 15	10. 28	·1055					
16. 54	46. 5	10. 35	·1055					
17. 4	45. 15	10. 51:	·1062					
17. 27	50. 45	11. 11	·1053					
17. 38	47. 55	11. 19	·1056					
17. 42	49. 0	11. 33	·1049					
	***	11. 59	·1062					
18. 17	46. 55	12. 27	·1046					
18. 28	49. 5	12. 52	·1047					
18. 38	46. 0		***					
18. 44	49. 25	13. 20	·1051					
	***	13. 38	·1043					
19. 0	51. 5	13. 57	·1059					
	***	14. 15	·1040					
19. 16	54. 35	14. 38	·1071					
	***	14. 53	·1070					
19. 59	50. 50	15. 0	·1075					
20. 8	49. 0	15. 13	·1065					
20. 20	48. 25	15. 39	·1052					
20. 25	52. 25	15. 45	·1053					
20. 30	50. 40	16. 0	·1040					
20. 35	53. 20	16. 22	·1046					
20. 41	50. 15	16. 30	·1058					
20. 59	51. 20	16. 43	·1047					
21. 15	48. 25	16. 59	·1045					
21. 28	48. 55	17. 25	·1055					
21. 35	47. 30	17. 34	·1049					
21. 44	50. 15	17. 39	·1052					
22. 5	49. 30	17. 45	·1051					
22. 17	47. 55	18. 13	·1060					
	***	18. 35	·1052					
22. 38	51. 20	18. 44	·1063					
23. 2	51. 0	19. 5	·1066					
	***	19. 45	·1048					
23. 21	57. 0	19. 54	·1052					
23. 31	56. 5	20. 2	·1044					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 30		Jan. 30						
h m	° ′ ″	h m		h m		h m	°	°
23. 55	20. 57. 35	20. 41	·1042					
23. 59	50. 30	21. 4	·1035					
		21. 17	·1042					
		21. 25	·1039					
		21. 37	·1044					
			***					
		22. 13	·1045					
		22. 21	·1033					
		22. 25	·1031					
		22. 30	·1035					
		22. 41	·1030					
		23. 0	·1045					
		23. 11	·1052					
		23. 52	·1020					
		23. 59	·1024					
Jan. 31		Jan. 31		Jan. 31		Jan. 31		
0. 0	20. 50. 25	0. 0	·1024	0. 0	·01337	1. 0	53·1	53·0
0. 33	47. 30	0. 2	·1025	1. 11	·01380	3. 0	53·6	54·3
0. 51	51. 55	0. 8	·1021	1. 35	·01407	9. 0	51·9	52·5
0. 54	51. 30		(†)	1. 54	·01390	21. 30	45·8	46·5
1. 6	53. 55	1. 0	·1057	3. 38	·01370			
1. 9	53. 30	1. 22	·1033	3. 47	·01367			
1. 35	20. 59. 35	1. 43	·1043	4. 39	·01323			
1. 41	21. 0. 5	1. 49	·1051	5. 14	·01278			
1. 50	20. 56. 55	2. 8	·1044	6. 10	·01264			
1. 58	55. 30	2. 15	·1048	6. 30	·01235			
2. 2	56. 50	2. 23	·1042	6. 39	·01235			
2. 8	55. 45	2. 28	·1045	7. 5	·01227			
2. 13	56. 30	2. 32	·1041	8. 39	·01263			
		2. 44	·1050	9. 4	·01226			
2. 46	51. 45	3. 13	·1048	9. 33	·01250			
2. 51	53. 15	3. 27	·1035	10. 14	·01235			
3. 2	49. 25	3. 40	·1045	10. 41	·01247			
3. 9	48. 10	3. 47	·1045	11. 2	·01230			
3. 27	47. 20	3. 55	·1052	11. 11	·01240			
3. 41	37. 55	4. 7	·1050	11. 28	·01215			
3. 51	37. 10	4. 30	·1052	12. 43	·01267			
4. 0	38. 15	4. 58	·1045	13. 0	·01263			
4. 8	40. 40	5. 36	·1045	13. 42	·01286			
4. 13	41. 25	5. 45	·1066	17. 48	·01520			
5. 2	52. 50	5. 52	·1048	22. 42	·01550			
5. 13	50. 0	6. 11	·1086		(†)			
5. 38	51. 5	6. 24	·1058					
5. 48	40. 35	6. 32	·1063					
5. 55	42. 30	6. 46	·1053					
6. 3	30. 25	7. 3	·1033					
6. 19	38. 30	7. 23	·1037					
6. 23	39. 30	7. 52	·1035					
6. 40	44. 40	8. 19	·1051					
	***	8. 47	·1096					
7. 3	48. 45	9. 18	·1053					
7. 10	47. 5	9. 31	·1061					
7. 53	53. 45	10. 9	·1033					
8. 14	49. 40	10. 23	·1033					
8. 36	41. 20	10. 41	·1029					
8. 48	51. 5	11. 13	·1060					
9. 7	49. 50	11. 29	·1043					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 31		Jan. 31						
h m	° ′ ″	h m		h m		h m	°	°
9. 18	20. 51. 0	12. 0	·1057					
9. 27	42. 35	12. 9	·1052					
9. 39	51. 50	12. 14	·1053					
9. 54	49. 25	12. 28	·1044					
10. 20	39. 20	12. 46	·1051					
10. 31	41. 20	13. 0	·1041					
10. 36	40. 55	13. 28	·1053					
	***	13. 49	·1050					
10. 56	46. 35	14. 37	·1048					
11. 4	46. 50	15. 23	·1054					
11. 23	54. 30	15. 58	·1055					
11. 44	45. 10	16. 10	·1053					
11. 58	43. 15	16. 28	·1057					
12. 5	43. 55	16. 40	·1055					
12. 12	42. 40	17. 21	·1060					
12. 22	44. 10		***					
12. 28	43. 55	18. 59	·1063					
12. 53	52. 25	19. 13	·1067					
13. 7	51. 10	19. 19	·1064					
13. 26	52. 20	19. 28	·1068					
	***	19. 49	·1069					
13. 50	51. 0	20. 10	·1065					
14. 23	51. 45		***					
14. 39	54. 20	21. 31	·1062					
14. 52	53. 35	22. 0	·1060					
15. 0	54. 25	22. 9	·1063					
15. 12	52. 50	22. 22	·1059					
15. 29	52. 30	22. 38	·1065					
	***	23. 12	·1062					
15. 59	53. 15	23. 59	·1059					
16. 12	54. 20							
16. 33	53. 15							
16. 42	54. 25							
16. 57	52. 45							
17. 22	53. 10							
17. 32	54. 35							
17. 43	52. 40							
17. 50	53. 30							
	***							
18. 36	52. 30							
	***							
19. 22	52. 45							
	***							
20. 48	51. 0							
21. 5	52. 35							
21. 26	52. 0							
	***							
22. 8	54. 10							
	***							
22. 26	53. 25							
22. 38	55. 55							
22. 55	50. 15							
23. 15	51. 15							
23. 26	50. 5							
23. 39	50. 50							
23. 59	50. 20							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 1		Feb. 1		Feb. 1		Feb. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 50. 20	0. 0	·1059	8. 30	·01421*	8. 30	48 ·7	49 ·0
1. 5	52. 45	0. 20	·1063	21. 0	·01485*	21. 0	47 ·1	47 ·9
	***	1. 37	·1062					
2. 54	52. 25		***					
3. 58	49. 5	1. 55	·1060					
4. 14	49. 55	2. 28	·1062					
4. 32	49. 0	3. 1	·1061					
5. 18	50. 40	3. 32	·1057					
6. 13	47. 5	3. 49	·1059					
6. 37	48. 10	3. 58	·1058					
6. 56	47. 0	4. 20	·1064					
7. 13	46. 55	4. 46	·1061					
7. 35	44. 45		***					
8. 3	45. 40	5. 20	·1061					
8. 22	47. 30	5. 28	·1059					
8. 27	46. 0		***					
9. 8	48. 10	6. 47	·1059					
10. 12	47. 5	7. 22	·1067					
10. 26	48. 50	7. 32	·1066					
10. 43	40. 55	7. 49:	·1074					
10. 54	46. 30	8. 9	·1066					
11. 8	41. 55	8. 49	·1059					
11. 54	45. 50	9. 28	·1063					
12. 15	43. 40	9. 42	·1060					
12. 39	45. 40	9. 55	·1063					
13. 0	44. 45	10. 15	·1059					
13. 40	46. 0	10. 23	·1060					
14. 9	48. 15	10. 39	·1048					
14. 32	46. 55	11. 0	·1078					
15. 15	47. 35	11. 14	·1064					
16. 8	48. 20	11. 30	·1072					
16. 34	47. 25	11. 45	·1071					
17. 1	48. 45	12. 10	·1055					
17. 25	47. 20	12. 54	·1060					
	***	13. 14:	·1059					
18. 58	47. 30	13. 32	·1063					
19. 23	49. 20	14. 0:	·1059					
20. 25	47. 10	14. 23	·1063					
20. 39	48. 35	14. 30	·1060					
	***	14. 53	·1063					
21. 34	48. 20	16. 14	·1063					
	***	16. 26	·1065					
22. 24	50. 15	16. 44	·1064					
22. 53	49. 10		***					
23. 59	52. 50	18. 10	·1066					
		18. 23	·1070					
		19. 7	·1062					
		19. 15	·1067					
		20. 3	·1070					
		20. 24	·1067					
		20. 56	·1070					
		21. 42	·1063					
		21. 47	·1065					
		22. 14	·1056					
		22. 23	·1059					
			***					
		23. 59	·1067					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 2		Feb. 2		Feb. 2		Feb. 2		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 52. 50	0. 0	·1067		(†)	1. 0	50 ·1	50 ·0
0. 12	52. 15		(†)	1. 0	·01465	3. 0	51 ·8	51 ·4
0. 40	53. 0	0. 53	·1064	1. 25	·01452	9. 0	53 ·0	53 ·0
1. 9	52. 55	1. 22	·1057	3. 33	·01370	21. 0	51 ·1	51 ·2
1. 41	51. 5	1. 35	·1060	3. 54	·01344			
3. 2	52. 20	1. 53	·1063	4. 36	·01346			
3. 17	51. 25		(†)	5. 11	·01293			
	***	2. 54	·1063	6. 48	·01200			
3. 49	52. 10		***	8. 56	·01153			
4. 23	41. 40	3. 48	·1059	9. 23	·01125			
4. 37	40. 25	4. 1	·1039	11. 53	·01125			
5. 13	48. 30	4. 15	·1035	12. 19	·01096			
5. 39	46. 55	4. 44	·1057	12. 47	·01080			
5. 47	47. 40	5. 0:	·1060	13. 3	·01098			
	***	5. 39	·1052	14. 43	·01123			
6. 5	46. 50	6. 0	·1057	20. 58	·01180			
	***	6. 12	·1055	22. 15	·01220			
6. 33	48. 40	6. 36	·1058	23. 59	·01200			
6. 41	48. 0	6. 52	·1054					
	***	7. 39	·1058					
7. 51	48. 20	8. 0	·1051					
8. 6	44. 40	8. 19	·1054					
8. 20	45. 30	8. 25	·1051					
8. 33	36. 25	8. 59	·1086					
8. 37	37. 15	9. 17	·1059					
8. 51	34. 0	9. 25	·1059					
9. 17	45. 35	9. 44	·1048					
9. 23	45. 0	10. 4	·1054					
9. 27	46. 15	10. 20	·1051					
9. 36	45. 30	10. 38	·1058					
9. 48	46. 45	10. 44	·1054					
10. 0	45. 50	11. 9	·1048					
10. 12	47. 20	11. 29	·1054					
10. 33	46. 5	11. 50	·1077					
10. 40	47. 40	12. 7	·1066					
10. 55	45. 5	12. 16	·1072					
11. 18	45. 0	12. 34	·1052					
11. 28	46. 45	12. 55	·1055					
11. 46	45. 5	13. 18	·1052					
11. 56	49. 50	13. 32	·1055					
12. 19	44. 0	13. 40	·1054					
12. 30	46. 40	14. 15	·1056					
12. 46	42. 5	14. 28	·1053					
13. 8	47. 0	15. 13	·1061					
13. 34	46. 0	15. 17	·1065					
13. 47	47. 5	15. 52	·1059					
14. 37	49. 30	16. 8	·1061					
14. 53	48. 20	16. 38	·1059					
15. 45	48. 30	17. 1	·1060					
16. 3	50. 0	17. 34	·1060					
16. 21	48. 0	18. 14	·1056					
16. 37	49. 35	18. 57	·1062					
16. 53	48. 45	19. 1	·1060					
17. 49	48. 40	19. 12	·1064					
18. 0	49. 30		***					
18. 38	48. 30	19. 45	·1056					
19. 30	48. 55	19. 55	·1059					
19. 26	47. 50	20. 2	·1057					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

February 1. The photographic trace for the Vertical Force Magnet was totally lost, owing to a chemical error in the preparation of the paper.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 2		Feb. 2						
h m	° ′ ″	h m		h m		h m	°	°
19. 55	20. 48. 20	20. 23	·1058					
20. 7	47. 25	20. 50	·1056					
	***	21. 15	·1059					
21. 5	46. 5	21. 44	·1056					
21. 56	46. 40	22. 15	·1058					
22. 28	48. 15	22. 54	·1058					
23. 2	49. 10	23. 8	·1060					
23. 25	52. 35	23. 43	·1054					
23. 54	51. 20	23. 59	·1052					
23. 59	51. 40							
Feb. 3		Feb. 3		Feb. 3		Feb. 3		
0. 0	20. 51. 40	0. 0	·1052	0. 0	·01200	1. 0	53 ·0	52 ·9
0. 5	51. 45	0. 49	·1052	1. 35	·01140	3. 0	53 ·9	54 ·0
0. 30	50. 40	1. 0	·1092	2. 39	·01143	9. 0	53 ·1	52 ·9
0. 36	51. 45	1. 29	·1090	2. 50	·01137	21. 0	43 ·9	44 ·8
0. 58	51. 50	1. 42	·1095	3. 7	·01140	22. 0	44 ·3	44 ·9
1. 11	50. 0	2. 40	·1096		·01330	23. 0	44 ·7	45 ·0
1. 57	51. 10	3. 22	·1094	4. 49	·01234			
2. 18	51. 0		***	6. 59	·01168			
2. 37	51. 40	5. 15	·1098	11. 33	·01144			
2. 50	50. 35	5. 55	·1102	13. 27	·01240			
3. 57	48. 50	6. 7	·1100	13. 38	·01270			
4. 8	49. 0	6. 14	·1103	15. 44	·01368			
	***	6. 45	·1103	21. 34	·01420			
5. 24	47. 25	7. 24	·1093	23. 59	·01520			
	***	7. 35	·1094					
6. 49	48. 50		***					
7. 3	47. 20	8. 9	·1085					
	***	8. 28	·1092					
7. 38	47. 45	8. 57	·1086					
8. 5	45. 30	9. 22	·1094					
8. 19	46. 55	9. 52	·1098					
8. 24	48. 35	10. 5	·1097					
8. 56	46. 25	10. 30	·1120					
9. 4	48. 5	10. 38	·1113					
9. 19	47. 50	10. 52	·1114					
9. 30	48. 35	11. 26	·1092					
9. 51	46. 10	12. 0	·1098					
10. 15	37. 15	12. 21	·1096					
11. 18	43. 0	12. 29	·1099					
11. 34	41. 5	12. 40	·1098					
12. 17	45. 50	13. 0	·1100					
12. 39	47. 0	13. 21	·1098					
12. 48	45. 20	13. 43	·1100					
13. 13	44. 45	13. 59	·1110					
13. 32	46. 35	14. 8	·1107					
13. 52	46. 50	14. 38	·1109					
14. 7	49. 40	15. 16	·1106					
14. 50	43. 10	15. 19	·1102					
15. 28	46. 40	16. 12	·1101					
15. 43	46. 5	16. 19	·1103					
16. 9	48. 5	17. 2	·1107					
17. 7	46. 50	17. 45	·1106					
17. 19	48. 0	18. 23	·1110					
17. 36	47. 0	19. 13	·1107					
	***	19. 25	·1110					
18. 15	48. 5		***					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 3		Feb 3						
h m	° ′ ″	h m		h m		h m	°	°
19. 33	20. 48. 45	20. 25	·1107					
19. 39	47. 40		***					
	***	21. 26	·1108					
20. 51	47. 10	21. 47	·1104					
21. 33	48. 40		***					
21. 57	48. 10	22. 46	·1102					
22. 29	49. 35	23. 30	·1100					
22. 47	49. 10	23. 59	·1101					
23. 2	49. 45							
	***							
23. 59	50. 20							
Feb. 4		Feb. 4		Feb. 4		Feb. 4		
0. 0	20. 50. 20	0. 0	·1101	0. 0	·01520	0. 0	45 ·5	45 ·8
0. 34	50. 55	1. 21	·1100	0. 17	·01520	1. 0	46 ·0	46 ·6
1. 25	49. 50	1. 32	·1102		·01470	2. 0	46 ·8	47 ·3
2. 5	51. 50	2. 17	·1105	3. 35	·01483	3. 0	47 ·5	47 ·9
	***		***	7. 13	·01280	6. 0	50 ·1	50 ·2
3. 28	49. 35	3. 7	·1101	8. 23	·01240	9. 0	51 ·0	51 ·8
4. 10	49. 35	3. 22	·1102	11. 15	·01195	12. 0	51 ·0	51 ·3
4. 42	45. 30	3. 53	·1099	11. 30	·01158	18. 0	50 ·7	51 ·1
5. 2	47. 30	4. 12	·1090	11. 55	·01140	21. 0	50 ·5	51 ·5
5. 22	44. 40		***	18. 22	·01135	22. 0	50 ·7	51 ·8
	***	4. 57	·1102	19. 35	·01117	23. 0	51 ·0	51 ·8
5. 52	48. 10	5. 16	·1096	23. 59	·01103			
5. 59	48. 0	5. 50	·1104					
	***	5. 58	·1102					
6. 19	49. 45	6. 12	·1103					
6. 32	49. 10	6. 19	·1104					
7. 0	50. 40	6. 55	·1101					
7. 23	47. 55	7. 18	·1094					
7. 34	47. 45	7. 40	·1096					
7. 43	49. 20	7. 57	·1094					
8. 3	47. 30	8. 20	·1098					
9. 15	47. 25	8. 46	·1098					
9. 30	45. 20	9. 16	·1101					
9. 50	46. 55	9. 50	·1101					
9. 56	46. 20	10. 8	·1097					
	***	10. 37	·1100					
10. 59	45. 35	10. 54	·1098					
11. 13	46. 50	11. 14	·1099					
11. 26	50. 35	11. 23	·1120					
11. 39	45. 50	11. 34	·1107					
11. 45	45. 0	11. 45	·1112					
12. 0	42. 15	12. 0	·1104					
	***	12. 10	·1105					
12. 22	42. 55	12. 24	·1101					
12. 31	40. 40	12. 40	·1102					
12. 43	39. 15	12. 56	·1101					
14. 0	45. 40	13. 14	·1095					
14. 18	43. 55	13. 32	·1095					
14. 52	45. 0	13. 58	·1099					
15. 7	46. 55	14. 27	·1097					
15. 35	47. 35	14. 50	·1100					
15. 52	46. 25	15. 15	·1100					
16. 19	46. 30	15. 31	·1103					
16. 37	48. 35	16. 42	·1100					
16. 57	46. 25	17. 36	·1104					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

February 3d. 1h. HORIZONTAL FORCE.—Just before this time a displacement appears on the Photographic Sheet to the amount of 0·004, caused, it is supposed by a displacement of the slit in front of the gas light. Therefore all readings this year to February 3d. 0h. 49m. require increasing by 0·004 to reduce them to the series beginning at 1h on this day.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 7		Feb. 7						
h m	° ′ ″	h m		h m		h m	°	°
14. 51	20. 48. 55	19. 32	·1087					
15. 23	49. 20	19. 43	·1093					
15. 46	54. 35	20. 1	·1090					
	***	20. 31	·1093					
16. 14	58. 25		***					
16. 43	49. 55	21. 12	·1082					
16. 54	49. 0		***					
17. 6	51. 45	21. 52	·1078					
17. 19	49. 20	22. 31	·1081					
17. 24	50. 40	22. 37	·1064					
	***	22. 48	·1072					
18. 23	49. 25	23. 17	·1072					
18. 45	47. 40	23. 59	·1076					
19. 0	48. 55							
19. 10	46. 15							
19. 23	49. 10							
19. 33	46. 55							
19. 39	48. 15							
	***							
19. 52	48. 45							
19. 58	46. 35							
	***							
20. 42	48. 35							
	***							
21. 17	46. 20							
21. 23	48. 40							
21. 34	50. 40							
21. 42	48. 45							
21. 49	51. 5							
	***							
22. 13	49. 35							
22. 19	47. 50							
22. 32	51. 30							
22. 54	49. 0							
22. 58	50. 55							
23. 9	51. 50							
23. 39	50. 25							
23. 59	52. 30							
Feb. 8		Feb. 8		Feb. 8		Feb. 8		
0. 0	20. 52. 30	0. 0	·1076	0. 0	·01345	8. 25	49 ·2	50 ·4
0. 28	52. 55	0. 9	·1087	1. 15	·01377	21. 0	42 ·0	43 ·9
1. 0	52. 45	0. 14	·1073	2. 3	·01370			
1. 19	56. 5	0. 40	·1085	2. 33:	·01418			
1. 35	56. 55	1. 0	·1083	3. 23:	·01400			
1. 56	50. 5	1. 13	·1094	4. 3	·01420			
2. 33	51. 55	1. 26	·1087	5. 6	·01375			
2. 45	50. 30	1. 33	·1091	5. 42	·01380			
3. 20	49. 40	1. 45	·1075	6. 5:	·01357			
3. 33	50. 55	1. 48	·1081	6. 26:	·01390			
3. 53	45. 30	2. 1	·1071	6. 45	·01362			
4. 6	46. 40	2. 23	·1086	7. 15	·01343			
4. 13	45. 25	2. 55:	·1087	7. 44	·01340			
4. 31	48. 40	3. 41	·1071	8. 35	·01360			
4. 56	48. 0	4. 2	·1086	8. 51	·01360			
5. 23	44. 45	4. 13	·1082	9. 31	·01325			
5. 43	46. 10	4. 32	·1089	9. 41	·01340			
5. 55	43. 40	5. 7	·1083	10. 22	·01345			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 8		Feb. 8		Feb. 8				
h m	° ′ ″	h m		h m		h m	°	°
6. 20	20. 15. 25	5. 52	·1090	10. 34	·01325			
6. 39	28. 20	6. 3	·1060	11. 30	·01320			
6. 47	25. 0	6. 30	·1126	11. 49	·01340			
7. 1	26. 30	6. 43	·1105	12. 40	·01340			
7. 10	32. 5	6. 47	·1112	12. 53	·01347			
7. 22	30. 15	7. 2	·1112	13. 33	·01307			
7. 42	45. 30	7. 16	·1095	13. 55	·01307			
7. 52	42. 0	7. 25	·1099	14. 15	·01337			
7. 58	44. 30	7. 47	·1064	15. 35	·01362			
8. 6	43. 5	7. 55	·1072	21. 0	·01384			
8. 25	43. 55	8. 10:	·1064	22. 15	·01373			
8. 48	37. 55	8. 17	·1065	23. 59	·01457			
8. 58	44. 55	8. 52	·1102					
9. 4	42. 30	8. 58	·1089					
9. 10	46. 30	9. 5	·1095					
9. 21	45. 20	9. 12	·1085					
9. 32	47. 0	9. 20	·1095					
9. 45	41. 10	9. 32	·1072					
9. 58	43. 40	9. 53	·1086					
10. 13	44. 45	10. 9	·1084					
10. 23	43. 10	10. 23	·1109					
10. 36	46. 30	10. 36	·1100					
11. 2	40. 25	10. 43	·1107					
11. 15	41. 35	11. 3	·1107					
11. 45	37. 55	11. 40	·1084					
11. 54	40. 0	12. 1	·1093					
12. 10	41. 25	12. 21	·1091					
12. 33	35. 0	12. 37	·1094					
12. 41	31. 55	13. 8	·1063					
12. 57	36. 40	13. 27	·1101					
13. 4	36. 5	13. 37	·1094					
13. 33	51. 5	13. 52	·1093					
13. 47	48. 40	13. 58	·1099					
14. 0	41. 30	14. 7	·1098					
14. 9	39. 55	14. 12	·1102					
14. 26	46. 40	14. 40	·1092					
14. 41	47. 30	14. 53	·1096					
15. 8	45. 30	15. 37:	·1089					
15. 25	45. 45		***					
15. 50	47. 25	16. 45	·1097					
	***	17. 1	·1093					
16. 32	48. 5	17. 9	·1098					
17. 9	47. 0	17. 15	·1096					
17. 50	49. 5	17. 44	·1100					
18. 1	47. 30	17. 46	·1098					
18. 15	49. 15	17. 58	·1098					
18. 26	47. 0	18. 7	·1103					
18. 39	48. 5	18. 12	·1097					
18. 48	46. 55	18. 45	·1101					
18. 57	48. 0	18. 53	·1099					
21. 5	46. 15	19. 15	·1097					
21. 32	47. 55	19. 23	·1099					
22. 2	49. 0	20. 14	·1099					
22. 9	47. 40	20. 20	·1097					
22. 17	49. 5	21. 44	·1093					
22. 35	50. 35	21. 46	·1090					
22. 43	49. 50	21. 53	·1093					
	***	21. 59	·1086					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 8		Feb. 8						
h m	° ′ ″	h m		h m		h m	°	°
23. 20	20. 54. 25	22. 4	·1090					
23. 35	52. 40	22. 17	·1085					
23. 45	53. 0	22. 32	·1084					
23. 59	51. 35	22. 42	·1090					
		23. 8	·1086					
		23. 19	·1080					
		23. 30	·1083					
		23. 37	·1081					
		23. 59	·1089					
Feb. 9		Feb. 9		Feb. 9		Feb. 9		
0. 0	20. 51. 35	0. 0	·1089	0. 0	·01457	1. 0	44·0	45·2
0. 17	55. 40	0. 6	·1086	1. 45	·01470	3. 0	46·1	47·7
0. 25	52. 55	0. 33	·1089	3. 13	·01600	10. 8	48·0	47·0
0. 32	53. 15	0. 52	·1095		·01490	21. 0	44·4	44·2
0. 34	54. 30	0. 53	·1089	6. 21:	·01070			
0. 50	55. 45	1. 20	·1081	11. 28	·00967			
1. 17	52. 0	1. 40	·1086	12. 33	·00993			
1. 39	52. 10	1. 53	·1081	13. 18	·00990			
2. 6	52. 30	2. 12	·1098	13. 49	·01016			
2. 18	50. 55	2. 22	·1093	14. 11	·01014			
2. 31	48. 30	2. 26	·1099	15. 42	·01063			
2. 39	44. 35	2. 49	·1094	18. 26	·01112			
2. 43	46. 35	2. 58	·1103	18. 55	·01110			
	***	3. 4	·1099	22. 10	·01182			
3. 7	45. 0	3. 25	·1112	22. 49	·01200			
	***	3. 54	·1104	23. 59	·01220			
3. 27	40. 30	4. 13	·1106					
3. 34	43. 10	4. 22	·1110					
3. 39	42. 50	4. 35	·1108					
4. 0	48. 25	4. 39	·1111					
4. 10	47. 45	5. 45	·1113					
4. 17	48. 30	6. 15	·1112					
	***	6. 42:	·1108					
4. 45	48. 55	7. 7	·1110					
5. 1	48. 10		(†)					
5. 51	48. 40	10. 8	·1112*					
6. 2	47. 45	21. 0	·1114*					
6. 35	49. 20	21. 31	·1113					
6. 58	49. 5		***					
7. 12	47. 35	22. 2	·1110					
7. 23	48. 10	22. 10	·1107					
7. 53	47. 5	22. 23	·1108					
8. 11	47. 0	22. 45	·1097					
8. 21	45. 55	22. 50	·1099					
8. 43	45. 15	23. 8	·1090					
8. 57	46. 10	23. 23	·1096					
9. 12	46. 0	23. 49	·1101					
9. 19	44. 55	23. 59	·1102					
9. 33	45. 30							
9. 42	44. 15							
9. 55	45. 55							
10. 6	44. 0							
10. 39	45. 45							
10. 45	45. 0							
11. 4	45. 55							
11. 21	43. 40							
11. 48	46. 40							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 9								
h m	° ′ ″	h m		h m		h m	°	°
12. 0	20. 45. 5							
12. 19	46. 25							
12. 24	44. 55							
12. 32	46. 40							
12. 48	44. 25							
12. 56	44. 55							
13. 34	43. 5							
13. 55	47. 50							
14. 14	46. 30							
14. 32	46. 0							
14. 48	48. 25							
14. 56	47. 5							
15. 27	48. 35							
15. 42	49. 40							
16. 0	48. 30							
16. 13	49. 35							
16. 35	50. 15							
16. 37	51. 50							
16. 54	51. 45							
17. 17	48. 40							
17. 28	49. 10							
17. 39	47. 45							
18. 23	51. 35							
18. 35	49. 50							
	***							
19. 15	48. 55							
19. 20	51. 30							
	***							
19. 48	52. 10							
19. 53	51. 25							
20. 22	50. 35							
20. 30	49. 0							
20. 52	48. 5							
21. 24	50. 0							
21. 34	47. 45							
21. 42	50. 20							
	***							
22. 9	48. 45							
	***							
22. 23	51. 10							
	***							
22. 49	52. 35							
23. 4	51. 40							
23. 15	51. 10							
23. 39	50. 30							
23. 43	52. 30							
23. 57	52. 25							
23. 59	52. 40							
Feb. 10		Feb. 10		Feb. 10		Feb. 10		
0. 0	20. 52. 40	0. 0	·1102	0. 0	·01220	1. 0	47·0	47·0
0. 13	53. 25	0. 11	·1102	1. 25	·01240	3. 0	48·7	48·7
0. 31	52. 20		(†)	3. 2	·01276	9. 0	52·4	51·9
0. 55	53. 20	0. 53	·1105	5. 22	·01130	21. 0	48·8	49·0
1. 12	52. 35	1. 14	·1105	6. 0	·01124	22. 0	49·3	49·4
1. 28	53. 35	2. 0	·1106	6. 15	·01140	23. 0	49·8	49·7
1. 38	53. 0	2. 5	·1109	6. 26	·01128			
1. 45	53. 35	2. 54	·1100	9. 2	·01044			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 10		Feb. 10		Feb. 10				
h m	° ′ ″	h m		h m		h m	°	°
1. 59	20. 53. 15	3. 1	·1105	9. 36	·01006			
2. 7	54. 20	3. 7	·1101	13. 48	·00968			
2. 20	52. 40	3. 27	·1099	14. 53	·00978			
2. 41	52. 15	3. 49	·1103	15. 42	·00955			
2. 53	51. 10	3. 59	·1099	16. 29	·00980			
2. 59	53. 15	4. 9	·1103	16. 54	·00977			
3. 5	52. 5	4. 23	·1106	19. 8	·01025			
3. 37	50. 20	4. 30	·1104	21. 55	·01125			
3. 45	50. 35	5. 5	·1101	23. 59	·01130			
4. 8	49. 45	5. 25	·1089					
4. 26	50. 0	5. 37	·1092					
4. 37	50. 45	5. 50	·1084					
	***	6. 4	·1082					
5. 17	48. 40	6. 19	·1092					
5. 38	45. 0	6. 25	·1091					
5. 49	44. 40	6. 40	·1106					
5. 54	42. 10	7. 0	·1100					
6. 5	40. 15	7. 35	·1094					
6. 16	42. 55	8. 8	·1096					
6. 26	37. 50	8. 14	·1094					
6. 37	41. 45	8. 21	·1096					
6. 52	49. 40	8. 43	·1097					
6. 58	43. 25	8. 53	·1110					
7. 20	44. 10	9. 7	·1107					
7. 28	45. 30	9. 16	·1114					
7. 43	45. 45	9. 38	·1105					
7. 51	46. 55	9. 45	·1107					
8. 0	47. 0	10. 13	·1099					
8. 11	49. 0	10. 38	·1103					
8. 14	48. 35	10. 45	·1101					
8. 35	48. 50	11. 1	·1103					
8. 47	46. 50	11. 9	·1102					
9. 15	48. 30	11. 35	·1105					
9. 23	49. 55	11. 40	·1103					
9. 40	47. 5	11. 52	·1104					
9. 53	48. 35	12. 57	·1101					
10. 15	48. 10	13. 7	·1104					
10. 43	49. 20	13. 55	·1102					
11. 38	49. 35	14. 3	·1104					
12. 15	49. 0	14. 18	·1102					
12. 34	48. 45	15. 20	·1119					
12. 42	48. 10	15. 59	·1100					
13. 11	48. 50	16. 26	·1111					
13. 21	49. 55	16. 37	·1108					
13. 47	49. 15	17. 5	·1110					
14. 9	49. 55	17. 32	·1116					
14. 20	49. 5	17. 45	·1114					
14. 33	49. 30	17. 55	·1115					
14. 47	51. 20	18. 20	·1104					
15. 2	55. 50	18. 38	·1105					
15. 27	49. 35	19. 2	·1093					
15. 37	49. 10	19. 26	·1103					
15. 48	46. 30		***					
16. 11	50. 10	19. 46	·1105					
16. 20	49. 45	20. 14	·1097					
16. 35	52. 20	20. 22	·1105					
17. 7	51. 35	20. 38	·1106					
17. 21	49. 25	21. 1	·1099					
Feb. 10		Feb. 10						
h m	° ′ ″	h m		h m		h m	°	°
17. 54	20. 52. 0	21. 9	·1099					
17. 59	54. 0	21. 27	·1091					
18. 8	53. 20	21. 38	·1095					
18. 16	54. 50	21. 44	·1090					
18. 27	53. 45	21. 46	·1095					
18. 54	55. 5	21. 53	·1091					
19. 2	54. 25	22. 2	·1094					
19. 18	54. 30	22. 40	·1080					
19. 27	53. 30	22. 59	·1084					
19. 47	53. 50	23. 7	·1083					
20. 2	51. 10	23. 28	·1090					
20. 33	48. 55	23. 38	·1082					
20. 39	47. 30	23. 59	·1089					
20. 45	49. 35							
21. 32	51. 35							
21. 54	49. 5							
22. 3	50. 40							
22. 9	49. 15							
22. 12	51. 10							
22. 21	50. 5							
22. 37	53. 45							
23. 2	54. 0							
23. 11	53. 5							
23. 28	54. 10							
23. 43	54. 0							
23. 52	53. 20							
23. 56	55. 10							
23. 59	54. 15							
Feb. 11		Feb. 11		Feb. 11		Feb. 11		
0. 0	20. 54. 15	0. 0	·1089	0. 0	·01130	0. 0	50 ·3	50 ·0
0. 5	53. 10		(†)	0. 33	·01128	1. 0	50 ·5	50 ·0
0. 33	54. 5	0. 54	·1097	1. 30:	·01100	3. 0	51 ·4	50 ·8
0. 51	56. 45	1. 5	·1099	2. 45	·01150	6. 0	52 ·9	51 ·8
1. 0	55. 45	1. 20	·1093	3. 47	·01100	9. 0	52 ·0	51 ·0
1. 23	58. 0	1. 26	·1097		·01163	12. 0	49 ·7	48 ·5
1. 33	56. 55	1. 52	·1089	4. 55	·01110	18. 0	47 ·3	47 ·4
1. 39	57. 45	2. 6	·1079	5. 56	·01080	21. 0	47 ·4	47 ·7
1. 56	54. 0	2. 13	·1086		·01200	22. 0	47 ·9	47 ·7
1. 57	56. 35	2. 18	·1083	8. 50	·01153	23. 0	48 ·8	49 ·0
	***	2. 39	·1082	9. 8	·01170			
2. 17	57. 10	3. 0	·1096	10. 48	·01180			
2. 31	54. 20	3. 3	·1090	11. 8	·01193			
3. 5	53. 0	3. 32	·1094	11. 27	·01175			
3. 16	53. 25	4. 0	·1093	11. 53	·01180			
	***	4. 29	·1100	12. 39	·01227			
4. 0	51. 0	5. 30	·1101	13. 15:	·01210			
4. 13	51. 0	5. 39	·1102	13. 45	·01243			
4. 41	49. 40	6. 40	·1103	15. 40	·01350			
5. 26	49. 30	6. 48	·1100	17. 18	·01420			
6. 35	50. 20		***	21. 30	·01436			
6. 43	49. 30	7. 59	·1103	23. 59	·01380			
7. 12	49. 45	8. 37	·1097					
7. 26	49. 5	8. 50	·1090					
8. 2	49. 0	9. 20	·1092					
8. 12	47. 45	9. 36	·1096					
8. 34	48. 10	9. 50	·1095					
8. 43	46. 5	10. 8	·1104					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 11		Feb. 11						
h m	° ′ ″	h m		h m		h m	°	°
9. 0	20. 46. 20	10. 22	·1098					
9. 15	45. 45	10. 58	·1101					
9. 38	47. 55	11. 14	·1132					
9. 53	45. 50	11. 26	·1112					
10. 17	48. 40	11. 40	·1114					
10. 38	48. 25	12. 0	·1101					
	***	12. 14	·1105					
11. 7	46. 45	12. 34	·1086					
11. 21	49. 55	12. 50	·1110					
11. 29	47. 30	13. 10	·1114					
11. 51	44. 10	13. 30	·1110					
12. 11	39. 15	13. 40	·1105					
	***	14. 0	·1097					
12. 41	44. 5	14. 29	·1097					
13. 3	43. 40	15. 5	·1102					
13. 12	42. 50	15. 20	·1100					
13. 25	35. 30	15. 41	·1101					
14. 6	47. 35		***					
14. 42	48. 0	16. 14	·1108					
15. 4	47. 0	16. 42	·1107					
15. 23	48. 25	16. 52	·1101					
15. 34	50. 0	17. 0	·1104					
15. 51	49. 55	17. 17	·1103					
16. 5	50. 55	17. 53	·1113					
16. 16	49. 50		***					
16. 36	51. 20	18. 44	·1108					
16. 47	49. 10	18. 58	·1099					
17. 38	51. 10		***					
17. 45	50. 0	19. 47	·1102					
18. 29	49. 35	20. 8	·1096					
18. 36	50. 30	20. 25	·1096					
19. 12	49. 0	20. 38	·1091					
19. 21	49. 55	20. 54	·1094					
	***	21. 14	·1096					
20. 13	48. 50	21. 27	·1092					
	***	21. 46	·1096					
21. 2	47. 30	22. 1	·1096					
21. 16	50. 15	22. 30	·1088					
21. 26	47. 10	22. 35	·1091					
	***	22. 44	·1089					
22. 6	50. 25	22. 55	·1093					
22. 20	49. 5	23. 8	·1089					
22. 30	48. 55	23. 50	·1086					
22. 58	53. 0	23. 59	·1083					
23. 15	52. 20							
	***							
23. 37	53. 55							
23. 50	53. 5							
23. 59	54. 0							
Feb. 12		Feb. 12		Feb. 12		Feb. 12		
0. 0	20. 54. 0	0. 0	·1083	0. 0	·01380	0. 0	49 ·2	49 ·6
0. 8	54. 15	0. 30	·1086	0. 38	·01420	1. 0	49 ·5	50 ·4
0. 23	56. 0	0. 42	·1094	1. 58	·01376	2. 0	50 ·5	51 ·2
0. 32	54. 55	1. 12:	·1085	2. 23	·01380	3. 0	51 ·5	52 ·0
0. 41	58. 40	1. 44	·1093	3. 7	·01367	9. 0	51 ·8	51 ·8
0. 47	58. 20	2. 1	·1091	5. 17	·01190	21. 0	43 ·0	44 ·5
1. 0	55. 0	2. 10	·1097	5. 56	·01153			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 12		Feb. 12		Feb. 12				
h m	° ′ ″	h m		h m		h m	°	°
1. 23	20. 53. 40	2. 28	·1096	6. 40	{·01095 ·01203			
1. 33	54. 55	2. 47	·1090					
1. 39	54. 5	2. 54	·1094	8. 17	·01138			
2. 0	53. 10	3. 9	·1089	9. 16	·01130			
2. 9	54. 30	3. 22	·1101	10. 0:	·01100			
2. 13	53. 35		***	10. 47	·01100			
2. 21	54. 10	3. 48	·1108	11. 57	·01120			
2. 42	52. 0		***	13. 25	·01170			
2. 53	53. 55	4. 21	·1105	13. 34	·01200			
3. 12	50. 5	4. 58:	·1113	15. 33	·01280			
4. 10	50. 55	5. 38	·1090	17. 56	·01420			
5. 0	49. 0	5. 51	·1105	21. 26	·01423			
5. 22	41. 0	6. 7	·1110	22. 30	·01407			
5. 27	40. 5	6. 17	·1112	23. 59	·01465			
5. 39	35. 0	6. 45	·1107					
5. 58	39. 55	7. 19	·1107					
6. 5	40. 30	7. 32	·1104					
6. 19	46. 25	8. 2	·1106					
6. 41	49. 55	8. 21	·1100					
7. 0	50. 10	8. 33	·1099					
7. 17	49. 30	8. 47	·1099					
7. 34	50. 0	9. 22	·1112					
8. 24	48. 0	10. 14	·1095					
8. 45	39. 20		***					
	(†)	10. 55	·1097					
9. 0	36. 30	11. 15	·1100					
9. 40	44. 40	11. 23	·1099					
9. 58	43. 5	11. 56	·1102					
10. 9	43. 25	12. 7	·1105					
10. 26	40. 30	12. 29	·1103					
11. 7	47. 10	12. 59	·1104					
11. 30	47. 30	13. 16	·1102					
11. 41	48. 25	13. 45	·1106					
11. 53	47. 55	13. 50	·1104					
12. 26	49. 35	14. 23	·1106					
12. 45	49. 15	14. 38	·1105					
13. 6	50. 0	15. 53	·1108					
13. 18	49. 10	16. 11	·1111					
13. 43	48. 50	17. 8	·1111					
13. 50	49. 30	17. 16	·1110					
15. 11	48. 25	18. 8	·1111					
18. 19	49. 35		***					
19. 51	48. 5	19. 8	·1113					
20. 54	47. 10		***					
21. 3	48. 5	21. 24	·1106					
21. 25	47. 35	21. 30	·1107					
21. 52	48. 50	21. 46	·1105					
22. 4	48. 30	22. 14	·1104					
22. 30	50. 30	22. 28	·1100					
22. 44	49. 40	22. 52	·1100					
23. 2	51. 5	23. 1	·1104					
23. 13	51. 0	23. 31	·1103					
23. 24	53. 15	23. 59	·1103					
23. 38	52. 20							
23. 45	52. 45							
23. 59	53. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 13		Feb. 13		Feb. 13		Feb. 13		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 53. 0	0. 0	·1103	0. 0	·01465	1. 0	45 ·3	46 ·7
0. 21	53. 35	0. 30	·1108	2. 2:	·01116	3. 0	49 ·3	51 ·0
0. 30	55. 0	0. 51	·1102	4. 30	·01340	9. 0	51 ·9	52 ·4
0. 51	53. 5	1. 27	·1104	6. 0	·01153	21. 0	43 ·9	46 ·0
1. 5	52. 30	1. 45	·1111	7. 33	{·01080			
1. 53	55. 20	2. 5	·1106		{·01160			
2. 14	53. 0	2. 16	·1110	9. 30	·01075			
2. 20	53. 5	2. 41	·1107	11. 25	·01065			
2. 35	51. 35	3. 16	·1109	13. 27	·01083			
2. 55	52. 35	4. 22	·1098	15. 15	·01145			
3. 21	51. 40	5. 23	·1104	20. 10	·01400			
3. 50	51. 45	5. 43	·1099	21. 0	·01425			
4. 32	49. 45	6. 16	·1106	21. 22	·01460			
4. 49	51. 0	6. 35	·1105	23. 59	·01570			
5. 26	48. 15	7. 36	·1105					
5. 39	49. 5	8. 44	·1108					
6. 4	47. 50	10. 42	·1108					
6. 25	47. 30	11. 0	·1113					
7. 32	49. 50	11. 25	·1105					
10. 24	48. 15	11. 45	·1106					
10. 43	48. 30	12. 9:	·1116					
11. 13	45. 0	13. 0	·1107					
11. 46	48. 25	15. 12	·1111					
12. 0	46. 20	16. 59	·1115					
13. 32	49. 0	17. 52	·1118					
14. 49	49. 0	19. 30	·1114					
15. 30	48. 15	20. 15	·1116					
16. 0	48. 55	21. 8	·1109					
17. 13	48. 30	22. 21	·1104					
17. 53	47. 55	23. 12	·1102					
19. 14	48. 20	23. 48	·1109					
19. 25	49. 0	23. 59	·1106					
20. 49	48. 15							
21. 23	48. 30							
22. 22	52. 5							
23. 0	48. 25							
23. 53	55. 0							
23. 59	54. 20							
Feb. 14		Feb. 14		Feb. 14		Feb. 14		
0. 0	20. 54. 20	0. 0	·1106	0. 0	·01570	1. 0	46 ·9	47 ·8
0. 40	51. 35	0. 28	·1103		(†)	3. 0	49 ·0	48 ·9
1. 9	53. 0	0. 50	·1104	1. 0	·01569*	9. 0	49 ·0	48 ·0
1. 39	51. 30	1. 10	·1108	1. 39	·01526	22. 53	40 ·0	41 ·7
2. 22	51. 0	1. 42	·1106	2. 29	·01517			
2. 26	52. 30	2. 13	·1111	3. 0	·01473			
3. 1	50. 0	2. 27	·1108	3. 15	·01470			
4. 5	49. 30		***	6. 8:	·01260			
6. 48	49. 25	3. 0	·1113	8. 15	·01204			
8. 33	48. 15	4. 24	·1116	10. 21	·01223			
9. 39	45. 30	4. 38	·1114	13. 28	·01324			
10. 20	47. 25	5. 20	·1114	16. 5	·01440			
10. 27	46. 40	5. 47	·1110	22. 14	·01433			
10. 41	49. 0	6. 46	·1108	23. 59	·01498			
11. 0	47. 50	7. 13	·1111					
11. 30	49. 0	8. 2	·1108					
12. 53	50. 0	8. 17	·1110					
14. 50	49. 45	9. 17	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 14		Feb. 14						
h m	° ′ ″	h m		h m		h m	°	°
15. 42	20. 49. 20	9. 52	·1102					
16. 0	49. 0	10. 15	·1102					
18. 36	49. 30	11. 0	·1108					
19. 8	48. 25	11. 17	·1108					
20. 8	47. 55	11. 40	·1111					
20. 39	46. 50	12. 15	·1110					
21. 5	47. 30	14. 8	·1112					
21. 14	49. 0	14. 23	·1114					
21. 35	48. 5	17. 0	·1118					
21. 40	49. 0	18. 4	·1118					
22. 14	50. 20	19. 5	·1119					
22. 47	53. 35	20. 53	·1108					
23. 0	52. 25	21. 26	·1108					
23. 59	54. 0	21. 42	·1110					
		22. 50	·1104					
		23. 0	·1106					
		23. 19	·1104					
		23. 59	·1108					
Feb. 15		Feb. 15		Feb. 15		Feb. 15		
0. 0	20. 54. 0	0. 0	·1108	0. 0	·01498	8. 42	45 ·8	47 ·0
0. 39	54. 55	1. 8	·1116	1. 45:	·01583	21. 0	37 ·8	40 ·3
0. 54	54. 10	1. 33	·1117	3. 25	·01500			
1. 9	55. 0	1. 53	·1113	8. 35:	·01145			
1. 31	54. 0	2. 22	·1115	11. 38	·01120			
1. 39	54. 20	2. 35	·1113	14. 56	·01180			
1. 57	52. 35	3. 30	·1113	21. 1	·01438			
2. 25	52. 25	4. 1	·1111	21. 21	·01462			
4. 2	49. 30	4. 31	·1114	21. 45	·01456			
5. 7	48. 35	5. 10	·1109	22. 43	·01484			
	***	5. 31	·1113	23. 59	·01573			
6. 24	48. 35	5. 52	·1108					
7. 4	49. 30	7. 8	·1109					
7. 30	48. 50	7. 47	·1112					
8. 6	49. 20	8. 9	·1109					
8. 40	43. 10	8. 22	·1114					
9. 26	47. 50	8. 37	·1108					
9. 55	48. 5	8. 48	·1114					
10. 48	46. 5	8. 59	·1115					
	***	9. 34	·1112					
11. 30	47. 25		***					
12. 3	46. 0	10. 23	·1114					
12. 43	48. 30	10. 39	·1110					
13. 1	48. 15	10. 48	·1113					
13. 27	50. 55	10. 55	·1112					
13. 41	49. 15	11. 14:	·1117					
13. 57	49. 15	11. 41	·1109					
14. 8	52. 20	12. 22	·1114					
14. 52	47. 50	13. 25	·1114					
15. 7	48. 45	13. 39	·1121					
15. 30	46. 55	14. 3	·1117					
16. 2	48. 50	14. 36	·1123					
	***	14. 55	·1119					
18. 12	47. 15	15. 22	·1119					
	***	15. 32	·1121					
20. 9	48. 5	15. 53	·1116					
20. 54	47. 10	16. 34	·1119					
21. 5	49. 10		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Feb. 15 h m	° ′ ″
21. 45	20. 49. 50
22. 0	49. 15
22. 36	52. 0
22. 45	51. 30
	***
23. 37	54. 15
23. 59	54. 10
Feb. 16	
0. 0	20. 54. 10
0. 37	53. 15
0. 53	54. 30
1. 6	53. 30
1. 26	55. 55
1. 40	55. 35
2. 3	52. 50
2. 20	53. 20
3. 5	52. 45
3. 43	50. 0
5. 24	48. 0
5. 38	48. 5
6. 4	45. 45
6. 23	45. 50
6. 32	43. 15
6. 40	43. 45
6. 49	43. 10
7. 27	48. 55
7. 56	47. 25
8. 9	48. 0
8. 29	47. 5
8. 36	47. 45
9. 27	47. 0
9. 38	48. 0
9. 56	47. 25
10. 28	46. 55
11. 40	46. 40
11. 53	45. 5
12. 30	47. 0
12. 53	51. 35
13. 23	47. 40
13. 45	46. 35
14. 1	47. 30
15. 26	49. 20
15. 52	50. 50
16. 13	49. 30
16. 21	50. 10
16. 39	48. 20
16. 49	49. 15
17. 20	48. 5
17. 34	49. 5
18. 40	47. 55
19. 3	48. 30
19. 15	47. 50
20. 4	46. 15
20. 24	46. 30
20. 48	45. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 15 h m	
18. 12	·1125
19. 30	·1119
	***
21. 2	·1123
21. 30	·1119
22. 0	·1114
22. 25	·1114
22. 45	·1111
23. 59	·1108
Feb. 16	
0. 0	·1108
0. 30	·1115
0. 45	·1113
1. 4	·1116
1. 28	·1116
1. 53	·1112
2. 16	·1115
2. 34	·1108
3. 38	·1107
4. 25	·1108
	***
5. 32	·1106
5. 59	·1099
6. 22	·1102
6. 50	·1098
7. 25	·1100
7. 40	·1096
8. 8	·1100
8. 22	·1099
8. 43	·1101
9. 11	·1099
9. 37	·1102
10. 20	·1102
10. 53	·1104
11. 9	·1102
11. 19	·1105
11. 37	·1105
11. 52	·1110
12. 22	·1105
13. 9	·1114
13. 51	·1108
15. 0	·1106
16. 22	·1110
16. 37	·1112
17. 37	·1113
18. 27	·1116
19. 3	·1115
19. 16	·1119
	(†)
21. 0	·1102*
22. 45	·1099
23. 17	·1098
23. 28	·1101
23. 59	·1092

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Feb. 16	
0. 0	·01573
0. 45	·01586
1. 52	·01578
2. 15:	·01600
3. 22	·01500
4. 42	·01230
7. 33	·01048
10. 6	·00980
	·01080
10. 57	·01060
13. 36	·01083
16. 8	01220
16. 15	·01242
20. 7	·01463
21. 53	·01460
23. 12	·01495
23. 59	·01540

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Feb. 16		
1. 0	43 ·2	44 ·0
3. 0	47 ·6	47 ·8
9. 0	51 ·5	51 ·8
21. 0	40 ·2	42 ·5

Greenwich Mean Solar Time.	Western Declination.
Feb. 16 h m	° ′ ″
21. 27	20. 48. 25
21. 39	48. 5
22. 34	51. 10
23. 29	55. 55
23. 39	57. 50
23. 52	57. 45
23. 59	56. 45
Feb. 17	
0. 0	20. 56. 45
0. 13	55. 35
0. 27	56. 15
0. 39	55. 30
1. 8	55. 55
1. 20	54. 45
1. 34	55. 25
2. 12	53. 0
2. 52	52. 20
3. 21	51. 5
4. 8	50. 40
4. 26	49. 35
4. 41	50. 0
5. 45	46. 30
5. 55	46. 40
6. 11	46. 5
6. 32	47. 20
7. 6	48. 25
8. 29	47. 30
11. 8	47. 10
11. 23	46. 15
11. 40	46. 20
11. 50	47. 10
12. 15	43. 0
12. 38	46. 15
13. 19	46. 0
15. 3	49. 20
15. 25	49. 0
15. 53	50. 55
16. 19	49. 0
16. 38	49. 30
16. 56	48. 30
17. 41	47. 55
18. 0	46. 50
18. 19	47. 15
18. 57	46. 55
	***
20. 3	47. 55
20. 28	46. 25
20. 39	47. 30
21. 5	47. 20
22. 12	49. 25
23. 8	52. 5
23. 59	53. 50
Feb. 18	
0. 0	20. 53. 50
0. 34	55. 20
0. 45	54. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Feb. 17	
0. 0	·1092
	(†)
0. 37	·1096
1. 0	·1099
1. 42	·1098
2. 4:	·1095
2. 53	·1100
	***
4. 0	·1100
4. 37	·1098
5. 22	·1096
6. 4	·1098
6. 35	·1103
6. 52	·1098
7. 26	·1095
7. 53	·1096
9. 8	·1098
10. 19	·1097
11. 17	·1099
11. 43	·1098
12. 9	·1108
12. 45	·1098
13. 23	·1103
13. 53	·1102
	***
15. 38	·1102
16. 36	·1107
17. 25	·1110
17. 45	·1109
18. 45	·1113
20. 23	·1112
21. 28	·1112
22. 9	·1105
22. 44	·1103
23. 59	·1101
Feb. 18	
0. 0	·1101
0. 15	·1102
0. 25	·1106
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Feb. 17	
0. 0	·01540
2. 24:	·01600
6. 0	·01120
6. 42	·01070
	·01125
7. 17	·01065
8. 10	·01030
10. 52	·00990
12. 0	·00992
14. 0	·01048
16. 49	·01190
17. 0	·01223
19. 37	·01355
19. 52	·01380
21. 30	·01478
22. 8	·01462
23. 59	·01525
Feb. 18	
0. 0	·01525
3. 0	·01646
4. 1:	·01580

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Feb. 17		
1. 0	44 ·5	45 ·2
3. 0	48 ·3	48 ·9
9. 0	52 ·0	51 ·0
21. 0	41 ·5	43 ·0
22. 0	41 ·0	42 ·3
23. 0	41 ·5	43 ·0
Feb. 18		
0. 0	42 ·5	43 ·0
1. 0	43 ·3	43 ·8
2. 0	44 ·8	45 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 18		Feb. 18		Feb. 18		Feb. 18		
h m	° ′ ″	h m		h m		h m	°	°
0. 54	20. 55. 30	1. 0	·1098*	5. 12	·01427	3. 0	46 ·3	47 ·0
1. 9	55. 30	1. 30	·1101	6. 15	·01320	6. 0	50 ·1	50 ·5
1. 24	56. 55	1. 44	·1105	8. 0	·01145	9. 0	50 ·8	50 ·7
1. 29	56. 20	2. 12	·1096	9. 20	·01067	12. 0	49 ·5	49 ·5
1. 40	57. 50	2. 37	·1102	9. 32	·01070	19. 0	47 ·4	47 ·8
1. 58	55. 25	2. 45	·1098	9. 55	·01056	21. 0	47 ·0	47 ·5
2. 38	55. 0	3. 0	·1107	10. 59	·01027	22. 0	47 ·1	47 ·8
2. 46	53. 25	3. 7	·1104	12. 37	·00995	23. 0	47 ·5	48 ·0
2. 54	54. 45	3. 15	·1107	15. 34	·00995			
3. 7	53. 30	3. 20	·1102	21. 1	{·01080			
3. 23	54. 35	3. 28	·1104		{·01230			
3. 39	53. 20	3. 43	·1103	22. 14	·01243			
3. 46	55. 50	3. 46	·1108	22. 21	·01263			
4. 14	54. 5	4. 28	·1090	23. 59	·01283			
4. 25	53. 0	4. 47	·1092					
4. 41	53. 25	5. 13	·1088					
4. 56	51. 55	5. 26	·1093					
5. 23	48. 0	5. 41	·1093					
5. 42	50. 35	6. 17	·1083					
5. 58	51. 0	6. 36	·1084					
6. 9	52. 30	6. 55	·1093					
6. 19	51. 55	7. 14	·1088					
6. 45	49. 25	7. 41	·1091					
6. 54	50. 10	8. 3	·1082					
7. 11	49. 5	8. 45	·1089					
7. 20	49. 40	9. 12	·1077					
7. 30	47. 50	9. 28	·1087					
8. 1	47. 0	9. 45	·1079					
8. 12	45. 30	9. 52	·1081					
8. 29	46. 25	10. 15	·1075					
8. 45	45. 10	10. 33	·1079					
9. 39	43. 45	10. 51	·1071					
9. 51	41. 45	11. 0	·1074					
9. 59	43. 0	11. 21	·1068					
10. 11	41. 50	11. 40	·1074					
10. 25	38. 50	11. 52	·1069					
10. 51	35. 35	12. 0	·1072					
11. 15	35. 20	12. 9	·1068					
11. 30	37. 45	12. 15	·1072					
11. 53	39. 30	12. 24	·1070					
12. 0	38. 0	12. 58	·1080					
12. 14	39. 30	13. 16	·1079					
12. 22	38. 0	13. 34	·1086					
12. 26	38. 50	13. 58	·1086					
12. 36	36. 35	14. 45	·1088					
13. 3	41. 35	15. 9	·1102					
13. 37	41. 20	15. 42	·1096					
14. 0	42. 20	16. 26	·1098					
14. 53	43. 30	17. 23:	·1106					
15. 7	45. 5	18. 0	·1098					
15. 20	45. 15		***					
15. 32	42. 20	19. 18	·1089					
15. 52	41. 0	19. 41	·1089					
16. 25	45. 40	21. 2	·1080					
16. 55	46. 30	21. 23	·1081					
17. 28	45. 0	22. 0	·1085					
18. 15	46. 25	23. 23	·1084					
18. 30	49. 0		(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time. — — —	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 18		Feb. 18				Feb. 19		
h m	° ′ ″	h m		h m		h m	°	°
19. 9	20. 47. 40	23. 59	·1086			0. 0	48 ·2	48 ·8
19. 23	47. 0					1. 0	48 ·9	49 ·0
20. 7	47. 0					2. 0	49 ·6	49 ·9
20. 29	47. 30					3. 0	50 ·4	50 ·8
21. 42	47. 15					9. 0	52 ·5	53 ·0
	***					21. 0	48 ·2	48 ·9
23. 40	51. 5							
23. 59	51. 30							
Feb. 19		Feb. 19		Feb. 19		Feb. 19		
0. 0	20. 51. 30	0. 0	·1086	0. 0	·01283			
0. 57	51. 55	0. 23	·1089	1. 0	{·01277			
2. 59	50. 45	2. 0	·1090		{·01304			
3. 7	53. 35	3. 0	·1091	3. 0	·01280			
3. 17	52. 30	3. 15	·1107	3. 9	·01300			
3. 25	51. 50	3. 17	·1097	4. 39	·01216			
3. 32	52. 15	3. 33	·1096	5. 30	·01170			
4. 0	51. 50	3. 41	·1101	10. 18	·01095			
5. 24	51. 25	3. 44	·1097	12. 49	·01100			
5. 50	49. 20		***	19. 0	·01200			
6. 9	49. 25	4. 45	·1097	23. 8	·01320			
6. 52	50. 0	4. 56	·1099	23. 59	·01327			
8. 6	49. 40	5. 23	·1099					
8. 33	49. 55	5. 38	·1093					
8. 54	48. 30	6. 23	·1094					
9. 6	50. 10		***					
9. 21	48. 20	8. 37	·1094					
10. 52	48. 45	8. 49	·1092					
11. 20	48. 5	9. 15	·1093					
14. 20	49. 45	9. 30	·1094					
16. 24	49. 15	10. 0	·1097					
16. 52	48. 10	10. 9	·1095					
17. 35	49. 0	10. 16	·1097					
18. 7	47. 30	10. 55	·1095					
18. 39	49. 5	11. 22	·1097					
19. 14	47. 15	11. 36	·1096					
19. 46	48. 30	13. 15	·1097					
20. 9	47. 30		***					
20. 21	48. 20	14. 30	·1099					
20. 35	47. 30	16. 18	·1101					
21. 26	47. 0	16. 30	·1100					
22. 23	48. 10		***					
22. 39	50. 0	17. 55	·1098					
23. 5	49. 25	18. 34	·1102					
23. 59	53. 0	18. 53	·1102					
			***					
		19. 49	·1099					
		19. 59	·1096					
			***					
		20. 29	·1094					
		21. 16	·1092					
		21. 47	·1094					
		22. 25	·1088					
		22. 40	·1091					
		23. 12	·1085					
		23. 49	·1085					
		23. 59	·1087					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 20		Feb. 20		Feb. 20		Feb. 20		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 53. 0	0. 0	·1087	0. 0	·01327	1. 0	49 ·3	49 ·2
0. 58	54. 45	0. 23	·1084	3. 45	·01365	3. 0	50 ·9	50 ·7
1. 43	52. 10	1. 23	·1090	7. 45	·01202	9. 0	51 ·5	51 ·0
2. 45	51. 45	2. 7	·1094	9. 22	·01168	21. 0	45. 1	45 ·9
2. 53	52. 25		***	13. 0	·01183			
3. 18	51. 20	2. 49	·1091	17. 30	·01298			
3. 40	51. 40	3. 0	·1093	19. 40	·01380			
5. 40	50. 0	3. 23	·1089	20. 0	·01410			
7. 17	49. 45	3. 43	·1092	22. 26	·01420			
7. 43	48. 0	4. 0	·1088	23. 59	·01463			
8. 20	49. 5	4. 17	·1089					
8. 30	47. 45	4. 31	·1087					
8. 53	48. 30	5. 56	·1091					
9. 19	47. 50	7. 21	·1090					
9. 50	48. 45	7. 40	·1086					
11. 19	47. 55	8. 44	·1094					
11. 29	48. 15	8. 59	·1089					
15. 27	49. 45	9. 28	·1089					
15. 44	48. 50	9. 51	·1091					
15. 56	49. 30	10. 11	·1090					
16. 56	49. 5	10. 35	·1091					
18. 27	47. 55	11. 0	·1089					
19. 27	47. 50	11. 21	·1091					
20. 48	46. 0	15. 11	·1096					
21. 47	47. 0	15. 53	·1098					
23. 17	50. 35	16. 54	·1100					
23. 29	50. 5	17. 37	·1102					
23. 40	52. 0	18. 7	·1102					
23. 59	51. 10	18. 23	·1101					
		19. 7	·1103					
		20. 17	·1103					
		20. 45	·1099					
		21. 35	·1098					
		21. 45	·1096					
		21. 54	·1097					
		22. 18	·1094					
		22. 23	·1096					
		23. 32	·1094					
		23. 33	·1089					
		23. 54	·1090					
			(†)					
Feb. 21		Feb. 21		Feb. 21		Feb. 21		
0. 0	20. 51. 10		(†)	0. 0	·01463	1. 0	47 ·5	48 ·0
0. 12	51. 55	0. 9	·1090	0. 48	·01480	3. 0	51 ·0	51 ·0
0. 22	51. 40	0. 28	·1090	2. 12:	·01555	9. 0	52 ·0	51 ·3
0. 26	53. 15	0. 36	·1093	4. 38	·01320	22. 0	46 ·4	46 ·8
1. 25	53. 30	1. 1	·1092	7. 21	·01098			
3. 22	49. 35	1. 30	·1094	10. 45	·01048			
6. 23	48. 5	1. 44	·1092	13. 24	·01090			
6. 41	48. 35	2. 28	·1091	18. 45	·01265			
7. 30	48. 10	2. 54	·1093	21. 0	·01360			
7. 52	48. 30	3. 24	·1092	22. 40	·01370			
8. 59	46. 35	3. 49	·1093	23. 59	·01427			
9. 11	47. 30	5. 15	·1091					
9. 35	47. 0	5. 54	·1094					
9. 40	43. 15	6. 37	·1092					
10. 0	45. 5	6. 45	·1094					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 21		Feb. 21						
h m	° ′ ″	h m		h m		h m	°	°
10. 23	20. 44. 15	8. 45	·1095					
11. 1	45. 35	8. 55	·1093					
11. 40	44. 25	9. 0	·1095					
12. 29	46. 0	9. 13	·1088					
14. 3	45. 45	9. 16	·1091					
15. 15	47. 0	9. 25	·1086					
18. 17	46. 40	9. 46	·1099					
18. 29	47. 0	10. 1	·1095					
19. 25	46. 20	10. 28	·1096					
20. 34	44. 20	10. 50	·1093					
21. 32	43. 50	11. 10	·1097					
23. 24	49. 0	11. 35	·1094					
23. 30	50. 0	13. 46	·1096					
23. 40	49. 25	13. 58	·1099					
23. 59	50. 0	14. 8	·1097					
		15. 3	·1099					
		15. 34	·1102					
		16. 49	·1103					
		17. 0	·1104					
		17. 57	·1104					
		19. 6:	·1106					
		20. 30	·1099					
		20. 37	·1099					
		21. 14	·1093					
		22. 2	·1089					
		22. 33	·1088					
		22. 43	·1090					
		23. 10	·1081					
		23. 31	·1086					
		23. 59	·1085					
Feb. 22		Feb. 22		Feb. 22		Feb. 22		
0. 0	20. 50. 0	0. 0	·1085	0. 0	·01427	8. 30	48 ·8	48 ·8
0. 19	52. 25	0. 19	·1089	3. 31	·01500	21. 0	44 ·2	45 ·1
0. 55	54. 15		***	4. 22	·01490			
1. 23	53. 15	1. 8	·1095	4. 40	·01466			
1. 37	55. 50	1. 25	·1091	7. 39	·01430			
1. 42	55. 30	2. 1	·1106	8. 50	·01480			
1. 59	57. 55	2. 16	·1096	9. 23	·01460			
2. 15	54. 35		***	9. 27	·01477			
2. 31	57. 0	2. 52	·1098	9. 37	·01450			
3. 0	56. 35		***	9. 49	·01457			
3. 8	57. 0	3. 24	·1089	10. 25	·01360			
3. 25	55. 35	3. 39	·1090	10. 55	·01415			
3. 33	55. 55	3. 58	·1083	11. 4	·01355			
3. 50	52. 30	4. 10	·1086	11. 41	·01277			
4. 2	54. 50	4. 17	·1082	12. 0	·01280			
4. 23	54. 50	4. 23	·1086	12. 15	·01268			
5. 12	51. 45	4. 40	·1078	12. 35	·01290			
6. 45	50. 15	5. 2	·1081	12. 51	·01270			
7. 9	48. 35	5. 39	·1091	13. 17	·01300			
7. 27	49. 55	5. 59	·1094	13. 38	·01290			
7. 39	47. 40	6. 15	·1089	13. 57:	·01320			
7. 44	48. 30	6. 32	·1088	14. 12	·01294			
7. 58	46. 40	6. 45	·1089	15. 18	·01356			
8. 17	46. 55	6. 49	·1095	17. 41	·01415			
8. 31	47. 30		***	18. 33	·01400			
8. 37	49. 0	7. 43	·1079	19. 57	·01475			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Feb. 22	
h m	° ′ ″
8. 56	20. 41. 55
9. 4	43. 50
9. 21	44. 15
9. 52	25. 25
10. 12	31. 10
10. 19	30. 5
10. 25	33. 45
10. 40	25. 20
11. 0	43. 5
11. 6	37. 15
11. 11	42. 30
11. 15	41. 15
11. 20	43. 25
11. 53	37. 40
12. 6	36. 30
12. 26	31. 50
12. 37	36. 10
12. 39	35. 55
12. 49	44. 35
13. 7	34. 30
13. 14	36. 0
13. 24	34. 30
13. 26	36. 20
13. 30	35. 35
13. 44	46. 45
13. 56	48. 45
14. 4	44. 25
14. 24	38. 5
14. 39	40. 40
14. 49	38. 50
14. 54	39. 55
15. 2	39. 0
15. 15	40. 15
	***
15. 52	42. 0
16. 26	42. 20
16. 55	44. 5
17. 23	48. 30
17. 32	48. 15
17. 41	50. 55
18. 4	51. 55
18. 12	50. 20
18. 30	49. 10
18. 37	47. 35
18. 53	47. 45
19. 8	47. 0
	***
19. 36	48. 20
19. 47	47. 10
	***
20. 10	46. 0
20. 20	47. 25
20. 32	46. 30
	***
20. 57	48. 0
21. 5	47. 15
21. 37	49. 10
21. 43	47. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 22	
h m	
7. 52	·1085
7. 57	·1084
8. 16	·1088
8. 27	·1067
8. 46	·1053
8. 59	·1062
9. 12	·1063
9. 26	·1052
9. 32	·1066
9. 39	·1060
9. 44	·1068
9. 55	·1084
10. 0	·1078
10. 7	·1082
10. 30	·1041
10. 48	·1050
11. 0	·1092
11. 8	·1080
11. 11	·1088
11. 28	·1047
11. 35	·1051
11. 39	·1048
11. 55	·1066
12. 4	·1069
12. 30	·1052
12. 41	·1082
12. 49	·1064
12. 55	·1070
13. 8	·1082
13. 23	·1081
13. 40	·1058
13. 58	·1082
14. 20	·1074
14. 39	·1073
14. 47	·1066
14. 58	·1066
15. 15	·1071
15. 40	·1071
	***
15. 50	·1073
16. 37	·1075
16. 46	·1073
16. 58	·1075
17. 22	·1066
17. 44	·1074
18. 6	·1079
18. 23	·1089
18. 30	·1086
18. 45	·1091
19. 2	·1088
19. 11	·1091
19. 16	·1088
19. 25	·1089
	***
20. 4	·1085
20. 12	·1090
20. 23	·1085
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Feb. 22	
h m	
22. 57	·01500
23. 35	·01550
23. 59	·01553

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
Feb. 22	
h m	° ′ ″
21. 55	20. 53. 20
22. 15	49. 0
22. 37	54. 5
23. 7	53. 0
23. 38	57. 40
23. 59	54. 0
Feb. 23	
0. 0	20. 54. 0
0. 20	52. 20
0. 25	53. 30
0. 44	53. 30
0. 55	51. 55
1. 3	55. 5
1. 16	55. 25
1. 34	53. 25
3. 0	51. 20
3. 23	52. 0
4. 17	50. 55
4. 24	51. 30
	***
5. 19	46. 45
5. 24	47. 35
5. 33	46. 40
6. 4	47. 50
6. 13	46. 55
6. 52	47. 15
6. 55	45. 30
7. 6	44. 0
7. 12	39. 35
7. 18	41. 45
7. 23	40. 35
7. 36	49. 5
7. 48	42. 55
8. 1	47. 45
8. 19	46. 30
8. 26	42. 0
8. 33	40. 25
8. 37	37. 40
8. 51	41. 0
9. 0	40. 35
9. 25	45. 10
9. 45	42. 50
9. 56	43. 5
10. 4	41. 10
10. 15	44. 30
10. 25	40. 25
10. 38	38. 30
10. 43	39. 5
10. 56	45. 50
11. 8	43. 45
11. 27	44. 40
11. 37	43. 50
11. 48	44. 35
12. 0	42. 55
12. 10	46. 0
12. 29	47. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 22	
h m	
21. 39	·1075
21. 53	·1088
22. 13	·1070
22. 34	·1071
22. 49	·1052
23. 41	·1101
	(†)
Feb. 23	
	(†)
0. 32	·1101
0. 40	·1102
0. 52	·1094
0. 55	·1102
1. 14	·1100
1. 25	·1095
1. 38	·1096
1. 46	·1102
1. 58	·1100
2. 14	·1104
2. 59	·1102
	***
3. 52	·1105
4. 0	·1112
4. 22	·1099
4. 28	·1103
	***
4. 50	·1086
5. 9	·1079
5. 25	·1096
5. 31	·1092
5. 38	·1097
6. 14	·1090
6. 23	·1097
	***
7. 8	·1099
7. 14	·1093
7. 21	·1104
7. 25	·1102
7. 35	·1132
7. 47	·1111
8. 0	·1123
8. 25	·1098
8. 55	·1100
9. 7	·1095
9. 38	·1096
9. 58	·1089
10. 19	·1112
10. 26	·1108
10. 36	·1127
10. 54	·1124
11. 7	·1116
11. 22	·1125
12. 0	·1095
12. 19	·1102
12. 35	·1097
13. 0	·1100
13. 15	·1097

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Feb. 23	
h m	
0. 0	·01553
0. 40	·01586
1. 3	·01580
	·01460
3. 0	·01380
3. 57	·01370
5. 1	·01292
5. 18	·01300
7. 15	·01265
7. 34	·01237
7. 52	·01190
8. 11	·01160
9. 35	·01178
10. 22	·01160
11. 50	·01100
12. 22	·01115
21. 27	·01190
23. 27	·01240
23. 59	·01242

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Feb. 23		
1. 0	48 ·0	48 ·0
3. 0	50 ·1	50 ·5
9. 0	51 ·5	51 ·1
21. 0	49 ·7	50 ·2

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 23		Feb. 23						
h m	° ′ ″	h m		h m		h m	°	°
12. 36	20. 45. 5	13. 38	·1097					
13. 0	45. 0	13. 55	·1100					
13. 27	46. 50	14. 3	·1097					
13. 48	47. 25	15. 45	·1096					
14. 0	46. 20	16. 14	·1100					
14. 57	47. 30	16. 22	·1098					
15. 26	47. 15	17. 0	·1096					
15. 41	48. 25	17. 11	·1099					
16. 2	46. 35	17. 15	·1098					
16. 17	47. 30	17. 46	·1098					
16. 36	45. 55	18. 3	·1101					
17. 10	47. 30	18. 10	·1097					
17. 18	46. 30	18. 33	·1101					
17. 31	46. 10	19. 10	·1095					
17. 39	47. 55	19. 45	·1101					
17. 55	46. 0	19. 53	·1096					
18. 0	47. 35	20. 1	·1102					
18. 15	46. 30	20. 11	·1099					
18. 20	47. 50	20. 22	·1100					
18. 46	48. 0	20. 46	·1095					
19. 7	49. 30	21. 2	·1093					
19. 43	48. 40	21. 17	·1097					
19. 55	46. 35	21. 29	·1092					
20. 2	48. 30	21. 33	·1095					
20. 49	47. 0	21. 44	·1090					
21. 19	47. 50	21. 53	·1093					
21. 30	46. 45	22. 0	·1090					
21. 35	48. 10	22. 15	·1090					
21. 45	47. 5	22. 22	·1088					
22. 3	49. 40	22. 53	·1088					
	***	22. 57	·1084					
22. 40	48. 0	23. 14	·1085					
22. 45	49. 30	23. 20	·1091					
	***	23. 36	·1092					
23. 14	50. 0	23. 51	·1089					
23. 22	52. 5	23. 59	·1088					
23. 59	52. 35							
Feb. 24		Feb. 24		Feb. 24		Feb. 24		
0. 0	20. 52. 35	0. 0	·1088	0. 0	·01242	1. 0	51·5	52·0
0. 10	52. 5	0. 11	·1085	1. 45	·01222	3. 0	53·1	53·2
0. 27	52. 25	1. 15	·1086	2. 38	·01240	9. 0	52·3	52·0
0. 39	53. 40	1. 33	·1091	4. 36	·01213	21. 0	46·8	47·6
0. 47	53. 0	1. 45	·1087	5. 19	·01180	22. 0	46·9	47·8
1. 10	52. 50	2. 9	·1089	6. 30	·01183	23. 0	47·2	48·0
1. 33	54. 40	2. 31	·1099	7. 7	·01170			
1. 47	53. 15	2. 39	·1095	12. 18	·01170			
2. 9	56. 30	2. 42	·1096	16. 0	·01280			
2. 19	54. 45	2. 50	·1094	16. 23	·01240			
2. 27	54. 0	3. 14	·1102	17. 43	·01307			
2. 37	55. 40	3. 39	·1092	21. 5	·01450			
3. 0	55. 15	3. 56	·1090	23. 59	·01546			
3. 40	52. 25	4. 23	·1096					
3. 53	52. 30	4. 32	·1094					
4. 14	51. 0	5. 3	·1101					
4. 41	51. 15	5. 27	·1099					
5. 2	50. 20	5. 32	·1099					
5. 13	50. 55	5. 52	·1093					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 24		Feb. 24						
h m	° ′ ″	h m		h m		h m	°	°
5. 32	20. 48. 15	6. 3	·1095					
6. 0	44. 40	6. 29	·1084					
6. 16	41. 20	7. 9	·1098					
6. 25	40. 30	7. 36	·1089					
	***	7. 45	·1092					
7. 7	47. 30	8. 8	·1086					
7. 19	45. 5	8. 28	·1085					
7. 36	47. 30	8. 43	·1089					
8. 22	48. 30	9. 1	·1100					
8. 41	47. 5	9. 23	·1088					
8. 52	48. 55	9. 51	·1099					
9. 5	47. 50	10. 7	·1100					
9. 15	44. 45	10. 29	·1097					
9. 21	45. 40	10. 48	·1103					
9. 57	46. 5	11. 21	·1095					
10. 7	46. 50	11. 30	·1099					
10. 32	47. 20	11. 40	·1097					
11. 7	43. 55	11. 55	·1102					
11. 21	46. 25	12. 6	·1101					
11. 38	43. 30	12. 14	·1103					
11. 47	44. 30	12. 41	·1096					
12. 34	42. 0	12. 58	·1096					
12. 51	45. 25	13. 7	·1103					
13. 12	46. 55		***					
13. 23	45. 15	13. 45	·1098					
13. 33	45. 40	14. 3	·1100					
13. 53	46. 0	14. 14	1098					
14. 7	47. 25	14. 39	·1102					
14. 35	47. 30		***					
14. 52	43. 50	15. 30	·1100					
15. 23	43. 25	15. 37	·1102					
15. 36	40. 40	15. 50	·1102					
15. 57	48. 50	16. 13	·1122					
16. 23	40. 35	16. 29	·1111					
16. 42	39. 50	17. 35	·1100					
16. 55	38. 15	17. 41	·1103					
17. 12	41. 55	17. 47	·1099					
	***	17. 56	·1103					
18. 5	45. 0	18. 33	·1102					
18. 32	43. 55	18. 45	·1108					
18. 57	44. 5	19. 4	·1112					
19. 12	45. 0	19. 23	·1105					
	***	19. 32	·1106					
19. 43	44. 20	19. 38	·1104					
19. 53	45. 5	20. 7	·1107					
20. 3	44. 30	20. 28	·1098					
20. 9	46. 20	20. 37	·1097					
	***	20. 43	·1100					
20. 38	46. 0	20. 51	·1095					
20. 45	48. 25	21. 9	·1093					
21. 0	47. 20	21. 33	·1096					
21. 45	51. 55	21. 40	·1098					
21. 56	50. 0	21. 55	·1087					
22. 15	53. 10	22. 8	·1089					
22. 29	53. 40	22. 37	·1084					
22. 38	53. 0	22. 45	·1087					
22. 45	54. 45	23. 6	·1082					
22. 58	55. 25	23. 15	·1085					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 24		Feb. 24						
h m	° ′ ″	h m		h m		h m	°	°
23. 4	20. 54. 35	23. 22	·1082					
23. 15	56. 45	23. 32	·1082					
23. 40	55. 20	23. 39	·1079					
23. 59	58. 20	23. 45	·1080					
		23. 59	·1074					
Feb. 25		Feb. 25		Feb. 25		Feb. 25		
0. 0	20. 58. 20	0. 0	·1074	0. 0	·01546	0. 0	48 ·8	49 ·0
0. 23	20. 58. 55	0. 15	·1069	0. 36	·01567	1. 0	49 ·5	50 ·0
0. 31	21. 0. 45	0. 38	·1077	1. 5	·01540	2. 0	50 ·4	50 ·8
0. 57	20. 59. 40	0. 45	·1080	1. 40	·01540	3. 0	51 ·7	52 ·0
1. 15	57. 0	1. 23	·1092	2. 9	·01530	6. 0	53 ·1	53 ·0
1. 21	58. 5	1. 35	·1092	2. 47	·01540	9. 0	52 ·6	52 ·6
1. 36	20. 56. 45	1. 46	·1100	3. 52	·01500	12. 0	51 ·9	51 ·8
1. 51	21. 1. 10	2. 0	·1092	5. 33	·01390	19. 0	49 ·0	49 ·1
2. 15	20. 57. 30	2. 10	·1099	6. 0	·01320	21. 0	48 ·0	48 ·2
2. 24	55. 0	2. 24	·1094	6. 39	·01282	22. 0	48 ·0	48 ·5
2. 37	57. 30	2. 38	·1101	7. 27	·01264	23. 0	49 ·0	49 ·0
2. 55	58. 0	2. 44	·1097	7. 39	·01293			
3. 16	58. 35	2. 58	·1108	7. 55	·01266			
3. 28	55. 50	3. 8	·1100	8. 3	·01260			
3. 46	55. 25	3. 17	·1099	8. 11	·01223			
4. 0	56. 35	3. 29	·1092	8. 18	·01240			
4. 33	55. 40	4. 14	·1098	8. 23	·01190			
4. 47	57. 35	4. 47	·1097	8. 30	·01210			
5. 8	48. 30	5. 0	·1076	8. 41	·01160			
5. 22	45. 15	5. 17	·1079	9. 0	·01177			
5. 26	46. 50	5. 47	·1105	9. 7	·01148			
5. 39	43. 15	5. 54	·1095	9. 18	·01180			
5. 45	47. 50	6. 6	·1101	9. 40	·01086			
5. 54	45. 40	6. 16	·1084	9. 45	·01113			
6. 7	50. 30	6. 28	·1097	9. 55	·01100			
6. 16	46. 0	6. 36	·1093	10. 5	·01080			
6. 27	50. 0	6. 40	·1106	10. 37	·01073			
6. 37	48. 50	6. 53	·1091	11. 36	·01135			
6. 38	46. 35	7. 10	·1102	12. 4	·01138			
6. 42	47. 45	7. 15	·1096	12. 21	·01143			
6. 52	44. 20	7. 25	·1104	12. 39	·01080			
7. 6	49. 50	7. 37	·1076	12. 53	·01075			
7. 15	44. 50	7. 43	·1084	13. 16:	·01100			
7. 27	50. 45	8. 0	·1070	14. 8:	·01060			
7. 36	46. 0	8. 10	·1099	15. 23	·01130			
7. 42	45. 15	8. 15	·1068	15. 58	·01115			
8. 5	37. 0	8. 22	·1089	16. 15	·01063			
8. 10	49. 55	8. 25	·1063	17. 15	·01060			
8. 18	43. 10	8. 35	·1098	18. 7	·01097			
8. 20	51. 5	8. 46	·1061	18. 42	·01100			
8. 30	35. 25	8. 58	·1067	19. 5	·01156			
8. 41	46. 30	9. 8	·1035	19. 30	·01177			
8. 49	42. 0	9. 30	·1143	21. 33	·01317			
9. 6	39. 5	9. 40	·1081	22. 24	·01394			
9. 25	0. 25	9. 44	·1094	23. 59	·01440			
9. 37	33. 30	9. 48	·1084					
9. 39	36. 5	9. 54	·1096					
9. 47	29. 30	10. 3	·1071					
9. 50	34. 20	10. 13	·1086					
9. 54	33. 30	10. 22	·1077					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 25		Feb. 25						
h m	° ′ ″	h m		h m		h m	°	°
10. 1	20. 39. 40	10. 31	·1077					
10. 12	31. 20	10. 58	·1058					
10. 22	33. 0	11. 11	·1066					
10. 34	31. 25	11. 23	·1067					
10. 48	36. 0	11. 36	·1074					
11. 0	38. 20	11. 53	·1064					
11. 11	35. 0	12. 23	·1076					
11. 20	36. 0	12. 30	·1093					
11. 32	35. 15	12. 39	·1085					
11. 51	44. 20	12. 52	·1096					
12. 20	37. 5	13. 0	·1084					
12. 37	53. 45	13. 14	·1095					
12. 51	46. 50	13. 29	·1080					
12. 58	44. 20	13. 43	·1082					
13. 12	34. 5	13. 50	·1086					
13. 25	42. 25	14. 12	·1081					
13. 28	41. 5	14. 33	·1085					
13. 52	38. 25	14. 43	·1074					
14. 0	35. 10	14. 47	·1078					
14. 15	35. 0	14. 58	·1074					
14. 24	33. 20	15. 18	·1082					
15. 2	46. 15	15. 28	·1080					
15. 22	46. 5	15. 46	·1084					
15. 43	41. 55	16. 24	·1083					
15. 55	47. 30	16. 40	·1089					
16. 10	50. 45	17. 2	·1114					
16. 34	47. 5	17. 13	·1112					
16. 49	45. 35	17. 30	·1118					
	***	18. 0	·1108					
17. 15	45. 5	18. 25	·1105					
17. 25	48. 20	18. 43	·1098					
17. 45	48. 20	19. 15	·1063					
18. 32	58. 30	19. 31	·1062					
18. 51	54. 55	19. 37	·1074					
18. 58	51. 35	19. 52	·1080					
19. 11	51. 35	20. 10	·1069					
19. 15	48. 55	20. 24	·1081					
19. 21	52. 0	20. 32	·1072					
	***	20. 37	·1078					
19. 45	50. 10	20. 46	·1074					
19. 55	48. 40	20. 56	·1077					
20. 4	51. 0	21. 10	·1074					
20. 18	50. 30	21. 23	·1083					
20. 25	49. 35	21. 42	·1077					
20. 32	51. 15	21. 49	·1082					
20. 46	49. 0	22. 10	·1079					
21. 5	51. 30	22. 16	·1069					
21. 22	49. 15	22. 25	·1073					
21. 36	51. 20	22. 45	·1061					
21. 48.	51. 30	23. 0	·1060					
21. 53	53. 10	23. 7	·1063					
21. 58	50. 20	23. 18	·1052					
	***	23. 24	·1057					
22. 23	53. 30	23. 38	·1051					
22. 40	53. 10	23. 53	·1056					
22. 51	55. 30	23. 59	·1059					
23. 8	54. 0							
23. 30	55. 55							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 25								
h m	° ′ ″	h m		h m		h m	°	°
23. 47	20. 55. 55							
23. 59	58. 20							
Feb. 26		Feb. 26		Feb. 26		Feb. 26		
0. 0	20. 58. 20	0. 0	·1059	0. 0	·01440	0. 0	49·5	49·7
0. 9	21. 0. 45	0. 8	·1067	0. 18	·01457	1. 0	50·3	51·0
0. 15	20. 59. 0	0. 12	·1063	1. 5	·01520	3. 0	52·5	52·8
0. 28	20. 58. 10	0. 22	·1068	3. 14	·01405	9. 0	52·5	52·0
0. 32	21. 0. 10	0. 38	·1049	3. 25	·01420	21. 0	48·6	49·5
0. 47	20. 55. 45		***	4. 45:	·01272			
0. 55	56. 30	1. 10	·1077	6. 6	·01263			
1. 4	52. 30	1. 23	·1075	6. 25	·01210			
1. 9	54. 55	1. 33	·1086	8. 7	{·01155			
1. 25	53. 10		***		{·01280			
1. 30	55. 0	2. 23	·1080	9. 5	·01230			
1. 35	53. 30	2. 53	·1088	9. 12	·01180			
1. 45	54. 50	3. 14	·1074	9. 25	·01190			
1. 58	53. 45	3. 32	·1104	9. 38	·01160			
2. 9	53. 50	3. 38	·1094	9. 59	·01215			
2. 41	51. 20	3. 41	·1096	10. 15	·01180			
2. 52	52. 15	3. 49	·1088	10. 55	·01220			
3. 4	51. 10	4. 4	·1100	12. 0	·01213			
3. 8	52. 5	4. 22	·1094	12. 42	·01155			
3. 18	46. 30	4. 25	·1098	13. 11	·01142			
3. 22	46. 0		***	14. 52	·01252			
3. 27	41. 15	5. 5	·1079	21. 25	·01385			
3. 34	44. 40		***	23. 27	·01435			
3. 38	44. 10	5. 25	·1084	23. 59	·01443			
3. 45	46. 5		***					
3. 57	42. 55	5. 46	·1080					
4. 57	47. 50	5. 58	·1073					
5. 8	46. 35	6. 8	·1079					
5. 23	47. 25	6. 19	·1113					
5. 41	45. 0	6. 34	·1081					
6. 13	30. 5	6. 41	·1089					
6. 25	43. 5	6. 50	·1069					
6. 39	38. 0	7. 0	·1078					
6. 47	42. 30	7. 31	·1086					
6. 56	36. 25	7. 52	·1075					
7. 18	33. 0	8. 35	·1077					
7. 40	38. 15	8. 45	·1093					
9. 1	45. 0	8. 56	·1069					
9. 7	50. 0	9. 0	·1087					
9. 14	49. 5	9. 7	·1074					
9. 18	53. 50	9. 13	·1089					
9. 27	43. 35	9. 19	·1076					
9. 40	49. 30	9. 30	·1108					
10. 0	39. 20	9. 45	·1076					
10. 18	48. 0	9. 58	·1085					
10. 31	46. 10	10. 7	·1108					
10. 40	46. 10	10. 23	·1084					
10. 49	44. 40	10. 38	·1084					
11. 12	46. 25	11. 1	·1092					
11. 25	43. 20	11. 8	·1088					
11. 37	46. 55	11. 17	·1088					
11. 45	47. 15	11. 30	·1103					
11. 55	46. 40	12. 0	·1094					
12. 7	49. 40	12. 14	·1103					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 26		Feb. 26						
h m	° ′ ″	h m		h m		h m	°	°
12. 15	20. 48. 15	12. 19	·1114					
	***	12. 23	·1103					
12. 39	51. 40	12. 32:	·1104					
12. 51	48. 55	12. 43	·1098					
13. 21	48. 5	12. 54	·1105					
13. 33	44. 5	13. 6	·1104					
14. 1	42. 35	13. 20	·1097					
14. 20	44. 50	13. 43	·1111					
14. 46	44. 15	13. 54	·1108					
15. 13	47. 10	14. 35	·1089					
15. 32	46. 10	14. 51	·1093					
	***	15. 20	·1094					
17. 7	48. 0		***					
17. 41	47. 10	16. 1	·1096					
18. 7	47. 55	16. 40	·1097					
18. 53	45. 55	17. 46	·1095					
19. 22	49. 5	18. 5	·1099					
19. 30	48. 20	18. 22	·1097					
19. 46	48. 25		***					
19. 49	47. 0	18. 47	·1100					
19. 56	48. 55	19. 13	·1083					
20. 0	47. 10	19. 27	·1087					
	***	19. 39	·1086					
20. 22	45. 55	19. 45	·1082					
20. 45	45. 0	19. 50	·1086					
20. 56	47. 55	20. 10	·1088					
21. 7	47. 20	20. 24	·1083					
21. 40	50. 0	20. 40	·1090					
22. 0	46. 50	21. 25	·1090					
22. 10	48. 5	21. 30	·1089					
22. 22	46. 55	21. 48	·1091					
22. 27	48. 50	22. 15	·1077					
22. 44	47. 0	22. 37	·1086					
22. 49	48. 30		***					
	***	23. 7	·1092					
23. 25	49. 40	23. 12	·1096					
23. 29	51. 30	23. 16	·1091					
23. 37	51. 5	23. 52	·1093					
23. 59	52. 35		(†)					
Feb. 27		Feb. 27		Feb. 27		Feb. 27		
0. 0	20. 52. 35		(†)	0. 0	·01443	1. 0	51·4	51·9
0. 7	53. 55	0. 19	·1091	0. 23	·01433	3. 0	53·5	54·0
0. 10	52. 15	0. 30	·1100	2. 8	·01420	9. 0	54·5	54·0
0. 23	56. 50	0. 43	·1087	2. 45	{·01390	21. 0	45·3	47·3
0. 34	56. 35	0. 59	·1084		{·01410			
0. 55	51. 30	1. 25	·1088	3. 10	·01380			
1. 21	52. 40	1. 39	·1096	4. 8	·01306			
1. 42	51. 40	1. 52	·1099	4. 15	·01340			
1. 52	52. 10		***	5. 0	·01270			
2. 55	51. 35	3. 22	·1097	7. 56	·01160			
3. 13	49. 20	3. 42	·1101	9. 22	·01173			
3. 20	50. 55	4. 9	·1101	9. 33	·01155			
4. 23	48. 55	4. 32	·1103	9. 57	·01160			
4. 40	49. 15	4. 42	·1108	10. 7	·01180			
5. 30	48. 5	5. 7	·1106	10. 27	·01160			
5. 56	48. 35	5. 37	·1107	11. 0	·01200			
8. 55	47. 30	5. 44	·1110	13. 16	·01260			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 27		Feb. 27		Feb. 27				
h m	° ′ ″	h m		h m		h m	°	°
9. 24	20. 47. 45	5. 50	·1108	15. 37	·01385			
9. 34	34. 50	6. 51	·1106	17. 6	·01457			
9. 39	36. 5	7. 52	·1109	20. 30	·01480			
9. 51	37. 10	8. 4	·1107	23. 59	·01625			
10. 19	49. 40	8. 20	·1110					
10. 34	43. 50	8. 40	·1108					
10. 40	38. 45	8. 53	·1111					
10. 52	39. 0	9. 21	·1110					
11. 9	42. 30	9. 37	·1120					
11. 30	42. 45	10. 0	·1090					
11. 38	41. 55	10. 7	·1004					
11. 54	43. 50	10. 21	·1082					
12. 8	46. 40	10. 30	·1080					
12. 25	44. 0	11. 2	·1103					
12. 49	42. 55	11. 14	·1099					
13. 12	43. 45	11. 23	·1099					
13. 33	42. 40	11. 43	·1092					
13. 54	42. 20	12. 4	·1094					
14. 7	43. 40	12. 32	·1100					
14. 23	43. 50	12. 52	·1106					
14. 29	47. 0	13. 20	·1100					
15. 10	46. 45	13. 30	·1103					
15. 38	46. 15	13. 51	·1101					
16. 15	47. 10	14. 9	·1101					
16. 31	44. 55	14. 24	·1097					
17. 13	46. 50	15. 22	·1106					
18. 14	46. 30	15. 50	·1105					
19. 56	47. 20		***					
20. 4	46. 0	16. 38	·1109					
20. 26	47. 35	17. 1	·1106					
20. 41	47. 0	17. 31	·1108					
21. 24	47. 35	18. 16	·1108					
21. 52	46. 0	19. 30	·1111					
22. 25	46. 55	19. 39	·1108					
22. 47	48. 35	20. 0	·1112					
23. 5	48. 30	20. 6	·1108					
23. 18	50. 55	20. 13	·1113					
23. 29	50. 10	20. 24	·1114					
23. 59	52. 45	20. 45	·1110					
		21. 25	·1112					
		21. 32	·1109					
		21. 46	·1111					
		22. 28	·1107					
		22. 47	·1108					
		23. 0	·1106					
		23. 16	·1107					
		23. 27	·1105					
		23. 59	·1106					
Feb. 28		Feb. 28		Feb. 28		Feb. 28		
0. 0	20. 52. 45	0. 0	·1106	0. 0	·01625	1. 0	48 ·6	50 ·2
0. 24	52. 15	0. 15	·1104		(†)	3. 0	52 ·0	52 ·3
0. 56	53. 40	0. 23	·1102	1. 0	·01613	9. 0	53 ·0	52 ·6
1. 38	52. 40	0. 55	·1106	1. 45	·01567	21. 30	45 ·0	46 ·4
2. 6	54. 25	1. 13	·1105	2. 14	·01580			
2. 23	54. 20	1. 24	·1103	3. 26	·01540			
2. 37	55. 0	1. 45	·1104	4. 48	·01350			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 28		Feb. 28		Feb. 28				
h m	° ′ ″	h m		h m		h m	°	°
2. 43	20. 54. 55	2. 20	·1112	6. 12	·01240			
2. 52	55. 20		***	9. 11	·01175			
3. 8	51. 55	3. 8	·1095	10. 49	·01130			
3. 23	51. 10	3. 32	·1105	13. 10	·01132			
3. 42	52. 0	3. 44	·1104	17. 41	·01413			
5. 30	50. 0	4. 18	·1107	19. 30	·01508			
	(†)	4. 37	·1106	21. 26	·01515			
6. 0	50. 35	5. 2	·1110	21. 54	·01500			
6. 27	41. 55	5. 23	·1110	23. 59	·01565			
6. 38	42. 15	5. 52:	·1115					
6. 51	43. 45	6. 19	·1093					
6. 56	43. 30	6. 23	·1099					
7. 11	46. 35	6. 27	·1093					
7. 19	45. 20	6. 31	·1100					
7. 55	49. 5	6. 42	·1100					
8. 7	48. 20	6. 49	·1096					
8. 22	49. 25	6. 54	·1098					
9. 0	48. 0	7. 0	·1095					
9. 23	47. 55	7. 9	·1098					
9. 30	46. 30	7. 14	·1096					
9. 45	46. 0	7. 23	·1103					
10. 13	48. 40	7. 34	·1094					
10. 44	47. 55	7. 38	·1095					
11. 23	47. 50	7. 45	·1086					
11. 40	47. 0	8. 5	·1091					
11. 51	45. 30	8. 11	·1096					
12. 4	47. 0	8. 32	·1090					
12. 22	44. 0	9. 10	·1100					
12. 42	47. 5	9. 49	·1098					
	***	10. 11	·1102					
13. 22	44. 50	10. 24	·1100					
	***	11. 9	·1100					
13. 51	47. 35	11. 24	·1103					
14. 27	47. 55	11. 51	·1099					
14. 50	45. 30	12. 31	·1111					
15. 9	46. 35	12. 58	·1105					
15. 26	45. 55	13. 37	·1100					
15. 41	47. 5	15. 25	·1100					
16. 10	46. 0	15. 36	·1102					
16. 32	46. 25	16. 45	·1102					
16. 51	45. 15	17. 4	·1104					
17. 19	47. 35	17. 40	·1104					
18. 2	46. 55	18. 24	·1107					
18. 15	46. 10	19. 7	·1104					
18. 47	47. 30	19. 25	·1106					
19. 7	47. 0	19. 34	·1103					
19. 33	47. 20	19. 43	·1108					
19. 39	45. 25	20. 4	·1109					
19. 46	46. 45	20. 30	·1105					
19. 56	46. 30	20. 58	·1105					
20. 8	47. 15	21. 28	·1100					
20. 40	46. 40	21. 52	·1102					
21. 0	47. 55	22. 13	·1096					
21. 4	47. 25	22. 28	·1103					
21. 25	47. 55	22. 44	·1105					
21. 51	49. 40	23. 8	·1104					
22. 25	50. 0	23. 26	·1109					
23. 8	53. 5	23. 32	·1104					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 28		Feb. 28						
h m	° ′ ″	h m		h m		h m	°	°
23. 41	20. 51. 50	23. 36	·1105					
23. 59	52. 5	23. 59	·1105					
Mar. 1		Mar. 1		Mar. 1		Mar. 1		
0. 0	20. 52. 5	0. 0	·1105	0. 0	·01565	9. 0	48·5	49·5
0. 38	53. 55	0. 7	·1104	0. 45	·01596	21. 0	47·0	48·8
1. 15	52. 10	0. 25	·1110	4. 0:	·01598			
1. 43	51. 30	0. 38	·1109	8. 22	·01530			
2. 12	52. 0	0. 49	·1112	9. 3	·01508			
2. 59	50. 5	1. 28	·1108	9. 10	·01513			
3. 19	50. 20		***	9. 45	·01480			
4. 6	48. 50	2. 24	·1109	12. 17	·01498			
5. 11	48. 0	4. 15	·1104	14. 32	·01545			
5. 30	47. 0	4. 53	·1106	15. 0	·01520			
6. 40	48. 30	5. 27	·1106	15. 45	·01520			
7. 9	49. 40	6. 0	·1113	16. 30	·01548			
8. 5	47. 5	6. 6	·1111	19. 14	·01602			
8. 34	51. 0	6. 27	·1111	20. 45	·01609			
9. 0	44. 0	6. 52	·1115	21. 30	·01580			
9. 11	49. 0	7. 6	·1112	23. 23	·01603			
9. 34	45. 55	7. 23	·1110	23. 59	·01592			
10. 4	47. 55	7. 30	·1112					
10. 17	45. 0	7. 48	·1111					
10. 29	44. 35	7. 58	·1115					
10. 51	47. 5	8. 0	·1112					
11. 26	47. 35	8. 15	·1126					
11. 38	46. 15	8. 53	·1112					
11. 59	45. 30	9. 2	·1134					
12. 24	48. 5	9. 15	·1124					
12. 52	49. 0	10. 2	·1105					
12. 58	52. 50	10. 23	·1110					
13. 19	47. 25	11. 4	·1105					
13. 33	46. 0	11. 23	·1112					
13. 55	46. 15	11. 46	·1107					
14. 14	51. 0	12. 4	·1110					
14. 36	46. 5	12. 15	·1109					
15. 22	42. 0	12. 37	·1110					
15. 35	43. 5	13. 2	·1112					
16. 32	44. 20	13. 14	·1110					
16. 50	43. 0	14. 1	·1105					
17. 20	45. 50	14. 24	·1121					
17. 41	49. 0	15. 0	·1116					
18. 22	47. 0	15. 26	·1117					
19. 5	46. 25	15. 32	·1114					
20. 20	46. 15	15. 45	·1108					
20. 27	45. 20	16. 23	·1107					
20. 37	47. 25	16. 45	·1111					
20. 49	45. 0	17. 35	·1104					
21. 2	47. 30	18. 16	·1110					
21. 28	48. 25	18. 30	·1107					
21. 43	48. 20	19. 15	·1107					
22. 9	52. 0	20. 29	·1101					
22. 55	55. 10	20. 44	·1106					
23. 13	49. 50	20. 52	·1101					
23. 37	58. 40	21. 9	·1107					
23. 55	57. 5	21. 47	·1092					
23. 59	58. 30		***					
		22. 17	·1089					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Mar. 1						
h m	° ′ ″	h m		h m		h m	°	°
		22. 37	·1080					
		23. 43	·1098					
		23. 59	·1091					
Mar. 2		Mar. 2		Mar. 2		Mar. 2		
0. 0	20. 58. 30	0. 0	·1091	0. 0	·01592	1. 0	51·7	52·0
0. 8	21. 0. 30	0. 15	·1103	0. 56	·01550	3. 0	54·0	54·5
0. 30	20. 56. 35		***	1. 52	·01520	9. 0	56·0	55·9
0. 37	51. 35	0. 40	·1092	2. 22	·01523	21. 0	49·9	50·9
0. 54	58. 35	0. 57	·1102	4. 8	·01368			
1. 2	56. 5	1. 4	·1096	4. 53	·01280			
1. 21	58. 10	1. 20	·1101	6. 13	·01210			
1. 42	58. 55	1. 47	·1097	8. 57	·01143			
1. 53	55. 10	1. 56	·1101		·01330			
2. 25	55. 35	2. 7	·1086	11. 2	·01310			
3. 6	54. 40	2. 20	·1089	11. 30:	·01280			
3. 17	55. 0	2. 37	·1099	11. 50	·01298			
3. 52	53. 25	2. 47	·1095	12. 22	·01307			
3. 58	53. 15		***	12. 48	·01298			
4. 38	48. 55	3. 15	·1098	14. 0	·01323			
4. 54	50. 0	3. 29	·1097	15. 42	·01340			
5. 43	50. 50	3. 56	·1088	15. 55	·01350			
5. 47	49. 45		***	18. 0	·01418			
9. 2	48. 20	4. 29	·1087	20. 4	·01440			
9. 25	49. 0	5. 44	·1095	21. 33	·01450			
10. 1	48. 35	5. 52	·1100	23. 59	·01552			
10. 49	46. 55	5. 56	·1097					
11. 6	48. 0	6. 12	·1096					
11. 41	35. 50	6. 17	·1099					
12. 5	42. 10	6. 52	·1100					
12. 13	42. 15		***					
12. 37	46. 40	8. 7	·1102					
12. 56	43. 25	8. 19	·1100					
13. 32	41. 55	9. 0	·1099					
14. 16	46. 20	9. 22	·1101					
14. 23	46. 45	9. 43	·1099					
14. 38	43. 5	10. 5	·1103					
15. 7	42. 55	10. 16	·1102					
15. 27	49. 15	10. 27	·1104					
16. 2	48. 25	10. 44	·1100					
16. 13	49. 35	11. 7	·1112					
17. 41	46. 30	11. 18	·1113					
	***	11. 44	·1089					
18. 8	47. 50	12. 14	·1081					
18. 15	45. 5	12. 55	·1102					
18. 28	47. 35	13. 27	·1094					
18. 53	47. 20	13. 35	·1093					
19. 13	48. 25	13. 46	·1092					
19. 38	47. 25	14. 1	·1089					
20. 13	47. 55	14. 12	·1096					
20. 24	46. 10	14. 33	·1101					
20. 38	48. 5	15. 15	·1100					
21. 21	48. 50	15. 25	·1105					
	***	15. 51	·1092					
22. 28	54. 55	16. 16	·1101					
	***	16. 30	·1098					
23. 30	57. 55	16. 49	·1104					
23. 36	56. 15	16. 53	·1103					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 2		Mar. 2						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 55. 40	17. 23	·1110					
			***					
		18. 26	·1109					
		18. 45	·1107					
			***					
		20. 19	·1101					
		20. 40	·1105					
		21. 20	·1098					
		21. 28	·1101					
		21. 44	·1098					
		21. 53	·1101					
		22. 11	·1096					
			***					
		23. 15	·1095					
		23. 22	·1091					
		23. 25	·1097					
		23. 35	·1090					
		23. 38	·1097					
		23. 59	·1093					
Mar. 3		Mar. 3		Mar. 3		Mar. 3		
0. 0	20. 55. 40	0. 0	·1093	0. 0	·01552	1. 0	54 ·0	54 ·8
0. 37	53. 10	0. 16	·1092	0. 36	·01550	3. 0	57 ·0	58 ·0
0. 45	56. 35	0. 29	·1105	0. 53	·01565	9. 0	59 ·5	59 ·0
1. 27	55. 20	0. 45	·1112	1. 45	·01535	21. 0	49 ·5	51 ·0
1. 39	56. 30	1. 6	·1106	3. 0	·01420	22. 0	49 ·9	51 ·5
2. 24	56. 5	1. 23	·1105	4. 0	·01233	23. 0	51 ·0	51 ·8
2. 39	52. 50		***	4. 27	·01224			
3. 0	55. 5	1. 58	·1112	7. 0	·01073			
3. 22	52. 35	2. 28	·1110	7. 26	·01080			
4. 10	48. 50	2. 37	·1103	7. 50	·01067			
4. 55	48. 55	2. 58	·1109	8. 14	·01080			
6. 29	49. 55	3. 4	·1114	9. 10	·01040			
6. 37	47. 0	3. 30	·1110	10. 57	·01052			
6. 43	47. 20	3. 57	·1101	12. 54	·01100			
7. 8	35. 30	4. 21	·1104	16. 22:	·01270			
7. 22	38. 5	4. 33	·1109	19. 28	·01458			
7. 30	36. 0	4. 58	·1112	21. 30	·01450			
7. 38	35. 35	5. 43	·1107	23. 59	·01514			
7. 54	27. 30	6. 30	·1113					
8. 17	37. 10	6. 46	·1120					
9. 4	45. 30	7. 3	·1102					
9. 30	47. 0	7. 13	·1110					
10. 41	46. 10	7. 23	·1113					
14. 14	46. 40	7. 37	·1110					
18. 52	45. 55	7. 48	·1088					
20. 7	44. 40	8. 8	·1112					
21. 0	45. 5	8. 29	·1107					
21. 42	47. 55	9. 0	·1105					
21. 53	46. 45	9. 21	·1108					
21. 57	48. 50	9. 45	·1108					
22. 13	48. 30	10. 2	·1111					
	***	10. 25	·1112					
22. 40	52. 0	10. 34	·1114					
23. 15	53. 30	11. 1	·1111					
23. 59	52. 15	11. 29	·1114					
		11. 55	·1113					
		12. 8	·1116					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Mar. 3						
h m	° ′ ″	h m		h m		h m	°	°
		12. 41	·1114					
		12. 57	·1115					
		13. 15	·1114					
		15. 25	·1114					
		17. 25	·1116					
		18. 39	·1113					
		20. 7	·1110					
		20. 15	·1112					
		21. 16	·1108					
			***					
		21. 53	·1102					
		22. 0	·1105					
		22. 13	·1103					
		23. 38	·1103					
		23. 59	·1105					
Mar. 4		Mar. 4		Mar. 4		Mar. 4		
0. 0	20. 52. 15	0. 0	·1105	0. 0	·01514	0. 0	52 ·0	53 ·3
0. 41	51. 50	1. 17	·1112	0. 30	·01500	1. 0	53 ·2	54 ·0
0. 48	52. 25		***	1. 36:	·01534	3. 0	56 ·1	57 ·5
1. 56	50. 0	1. 46	·1113	3. 3	·01440	6. 0	59 ·2	59 ·2
2. 31	51. 15	2. 10	·1115	5. 0	·01163	9. 0	58 ·9	58 ·0
2. 48	49. 40		***	6. 24	·01115	12. 0	56 ·9	56 ·1
3. 36	48. 20	2. 44	·1114	7. 19	·01090	18. 0	50 ·0	51 ·8
4. 6	49. 10	2. 49	·1111	7. 35	·01110	21. 0	50 ·2	52 ·0
4. 17	48. 20	3. 5	·1112	8. 2	·01080	22. 0	49 ·0	50 ·9
4. 26	48. 55	3. 37	·1108	10. 45	·01060	23. 0	50 ·0	51 ·0
4. 34	47. 15	4. 1	·1113	13. 5	·01120			
4. 45	46. 30	4. 38	·1104	14. 6	·01130			
4. 54	43. 55	4. 45	·1105	19. 57	·01473			
5. 8	43. 50	4. 55	·1102	20. 20	·01460			
5. 27	47. 0	5. 17	·1110	20. 50	·01460			
5. 55	47. 45		***	21. 3	·01480			
6. 18	45. 35	6. 17	·1104	21. 41	·01462			
6. 24	44. 0	6. 30	·1108	23. 0	·01526			
6. 38	48. 0	6. 42	·1103	23. 59	·01620			
6. 43	46. 10	6. 58	·1104					
7. 8	45. 10	7. 17	·1101					
7. 23	43. 25	7. 39	·1105					
7. 54	45. 5	8. 5	·1090					
8. 12	41. 0	8. 21	·1092					
8. 30	43. 40	8. 34	·1089					
8. 45	39. 40	8. 49	·1098					
8. 56	40. 25	9. 2	·1093					
9. 8	37. 35	9. 13	·1104					
9. 43	43. 35	9. 37	·1108					
	***	9. 52	·1103					
11. 40	46. 20	10. 7	·1104					
12. 8	45. 0	10. 16	·1109					
13. 8	44. 55	10. 32	·1107					
14. 9	41. 0	10. 53	·1108					
14. 14	42. 0	11. 8	·1106					
14. 24	42. 25	11. 34	·1110					
14. 40	45. 50	11. 46	·1107					
14. 59	46. 50	12. 14	·1108					
15. 11	45. 30	12. 39	·1112					
15. 56	46. 30	13. 5	·1121					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 4		Mar. 4						
h m	° ′ ″	h m		h m		h m	°	°
16. 30	20. 44. 0	13. 20	·1116					
17. 38	45. 20	13. 36	·1116					
18. 3	46. 55	13. 44	·1117					
18. 15	45. 15	14. 0	·1111					
18. 30	46. 25	14. 15	·1101					
18. 48	45. 20	14. 22	·1104					
	***	14. 30	·1102					
19. 45	45. 25	14. 53	·1107					
20. 9	51. 5	15. 33	·1109					
20. 21	50. 25	16. 17	·1117					
	***	16. 44	·1116					
20. 40	53. 35	16. 56	·1113					
20. 51	51. 50	17. 10	·1114					
20. 58	52. 15	17. 28	·1111					
21. 1	54. 25	17. 45	·1113					
21. 23	58. 0	17. 52	·1112					
21. 42	55. 55	18. 11	·1118					
21. 53	57. 50	18. 32	·1117					
22. 25	20. 59. 0		***					
22. 56	21. 2. 5	19. 10	·1120					
23. 13	0. 0		***					
23. 22	2. 10	19. 52	·1098					
23. 34	1. 35	20. 8	·1070					
23. 49	1. 55	20. 16	·1048					
23. 59	1. 0	20. 30	·1040					
		20. 50	·1077					
		21. 1	·1077					
		21. 20	·1067					
			***					
		22. 6	·1076					
		22. 17	·1069					
		22. 37	·1076					
		22. 53	·1075					
		23. 0	·1086					
		23. 13	·1081					
		23. 29	·1087					
		23. 59	·1085					
Mar. 5		Mar. 5		Mar. 5		Mar. 5		
0. 0	21. 1. 0	0. 0	·1085	0. 0	·01620	0. 0	51 ·5	52 ·2
0. 51	20. 56. 55	0. 9	·1082	1. 11	·01690	1. 0	52 ·7	53 ·5
1. 8	53. 35	0. 28	·1092	2. 0	·01678	2. 0	54 ·5	55 ·0
1. 34	55. 30	0. 40	·1089	2. 45	·01630	3. 0	56 ·5	57 ·0
1. 41	53. 55	1. 16	·1104	4. 57	·01260	9. 0	59 ·4	58 ·7
2. 20	53. 25		(†)	5. 54	·01120	21. 0	51 ·5	52 ·0
2. 28	52. 20	3. 29	·1110	8. 4	{·01043			
2. 54	52. 40	3. 41	·1113		{·01160			
3. 13	51. 50	4. 0	·1109	10. 5	·01140			
3. 27	49. 25	4. 14	·1115	10. 46	·01100			
3. 36	49. 40	4. 22	·1113	13. 34	·01170			
3. 51	48. 25		***	20. 35	·01520			
4. 35	47. 25	6. 6	·1122	21. 5	·01505			
5. 45	48. 30	6. 17	·1119	21. 48	·01524			
7. 8	47. 35	6. 31	·1124	22. 26	·01532			
8. 33	47. 15	7. 18	·1117	23. 6	·01572			
9. 24	47. 10	7. 24	·1120	23. 59	·01597			
9. 45	40. 20	7. 30	·1117					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 5		Mar. 5						
h m	° ′ ″	h m		h m		h m	°	°
9. 59	20. 42. 30	7. 38	·1121					
10. 7	41. 0	8. 19	·1116					
10. 28	46. 30	8. 25	·1118					
10. 38	44. 40	8. 35	·1114					
11. 6	43. 20	8. 42	·1117					
11. 17	44. 55	8. 51	·1116					
12. 37	46. 30	9. 1	·1118					
15. 31	46. 30	9. 7	·1123					
15. 43	47. 0	9. 13	·1119					
15. 53	46. 35	9. 37	·1113					
16. 3	47. 40	9. 48	·1123					
	***	9. 57	·1103					
16. 37	46. 5	9. 59	·1116					
17. 2	47. 10	10. 13	·1126					
17. 32	46. 25	10. 22	·1126					
17. 40	46. 50	10. 38	·1113					
18. 7	46. 25	10. 53	·1106					
18. 21	47. 30	11. 13	·1109					
18. 27	50. 5	11. 22	·1106					
18. 53	51. 0		***					
19. 11	50. 35	13. 0	·1113					
19. 27	47. 0	13. 5	·1116					
19. 40	47. 55	13. 13	·1114					
	***		***					
20. 25	45. 0	14. 4	·1114					
20. 32	45. 55	14. 20	·1117					
20. 50	45. 35	14. 30	·1115					
21. 0	48. 0		***					
21. 12	47. 25	16. 37	·1120					
21. 26	49. 45	16. 50	·1125					
21. 51	51. 0	17. 59	·1120					
22. 6	54. 55		***					
22. 41	57. 5	18. 20	·1126					
23. 13	54. 55	18. 29	·1120					
23. 34	56. 30	18. 38	·1122					
23. 40	55. 0	19. 10	·1121					
23. 59	54. 35	19. 38	·1123					
			***					
		20. 20	·1117					
			***					
		20. 52	·1116					
		21. 37	·1097					
		22. 1	·1104					
		22. 33	·1088					
		22. 52	·1081					
		22. 59	·1083					
		23. 12	·1080					
		23. 45	·1097					
		23. 59	·1101					
Mar. 6		Mar. 6		Mar. 6		Mar. 6		
0. 0	20. 54. 35	0. 0	·1101	0. 0	·01597	1. 0	54 ·0	54 ·0
0. 23	55. 35	0. 27	·1101	0. 58	·01553	3. 0	55 ·3	55 ·3
0. 28	54. 40	0. 55	·1107	3. 30	·01498	9. 0	54 ·0	53 ·2
0. 54	56. 0	1. 3	·1103	5. 34	·01407	21. 0	47 ·9	48 ·7
1. 2	54. 30	1. 14	·1116	6. 30	·01420			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 6		Mar. 6		Mar. 6				
h m	° ′ ″	h m		h m		h m	°	°
1. 10	20. 59. 50	1. 25	·1107	7. 0	·01430			
1. 41	58. 20	1. 43	·1103	8. 30	·01440			
1. 49	57. 15	1. 53	·1094	9. 42	·01480			
1. 58	57. 25	2. 9	·1092	10. 15	·01475			
2. 9	56. 40	2. 22	·1076	12. 27	·01543			
2. 22	52. 45	2. 49	·1093	14. 16	·01537			
2. 33	53. 45	2. 58	·1091	15. 0	·01527			
3. 7	51. 20	3. 44	·1106	17. 34	·01540			
3. 39	49. 50	4. 10	·1103	19. 26	·01540			
3. 42	50. 55		***	20. 0	·01555			
3. 47	50. 0	4. 29	·1105	21. 21	·01560			
4. 38	49. 30	4. 35	·1103	23. 59	·01650			
5. 38	48. 35	4. 52	·1107					
5. 47	47. 5	5. 20	·1104					
5. 56	47. 40	5. 41	·1099					
6. 8	44. 40	6. 0	·1104					
6. 25	45. 20	6. 8	·1104					
6. 52	40. 45	6. 23	·1108					
7. 42	47. 10	6. 38	·1104					
8. 26	47. 45	6. 56	·1110					
8. 57	47. 0	7. 30	·1109					
9. 21	44. 5	7. 53	·1109					
9. 38	46. 40	8. 11	·1112					
9. 48	47. 0	9. 9	·1111					
10. 0	50. 35	9. 19	·1115					
10. 17	47. 45	9. 32	·1115					
10. 34	44. 20	9. 43	·1111					
10. 58	47. 5	9. 55	·1120					
13. 14	47. 50	10. 8	·1115					
13. 52	41. 55	10. 20	·1117					
14. 21	50. 35	10. 36	·1123					
14. 45	50. 50	11. 8	·1113					
15. 7	48. 15		***					
15. 39	47. 40	12. 16	·1112					
17. 1	48. 0	12. 45	·1114					
17. 12	46. 55	13. 52	·1113					
17. 42	48. 35	14. 18	·1120					
17. 51	48. 20		***					
18. 7	50. 20	15. 14	·1116					
18. 14	50. 0	15. 56	·1115					
18. 45	51. 20		***					
18. 54	52. 50	16. 44	·1118					
19. 28	53. 0	16. 53	·1117					
19. 38	51. 35	17. 5	·1121					
20. 9	50. 0	17. 20	·1116					
20. 16	48. 55	17. 38	·1117					
20. 31	48. 10	17. 53	·1114					
20. 54	50. 40	18. 22	·1113					
21. 3	49. 0	18. 40	·1118					
21. 39	48. 5	19. 25:	·1108					
21. 48	49. 15	19. 51	·1112					
22. 10	48. 40	20. 15	·1106					
	***	20. 23	·1086					
23. 17	51. 30	21. 15	·1085					
	***	21. 26	·1094					
23. 59	55. 0	21. 44	·1094					
		22. 25	·1102					
		23. 36	·1099					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Mar. 6						
h m	° ′ ″	h m		h m		h m	°	°
		23. 44	·1099					
		23. 59	·1093					
Mar. 7		Mar. 7		Mar. 7		Mar. 7		
0. 0	20. 55. 0	0. 0	·1093	0. 0	·01650	1. 0	49 ·3	50 ·0
0. 34	52. 50	0. 23	·1092	4. 15	·01600	3. 0	50 ·7	50 ·9
0. 39	54. 25	0. 45	·1099	7. 31	·01502	9. 0	50 ·8	51 ·0
0. 51	54. 45	1. 7	·1094	10. 41	·01500	22. 0	44 ·0	45 ·0
1. 3	53. 0	1. 43	·1103	11. 33	·01447			
1. 31	54. 5	2. 15	·1101	12. 38	·01472			
2. 25	51. 40	2. 53	·1108	18. 29	·01640			
2. 47	50. 40	3. 13	·1109	20. 49	·01680			
3. 0	51. 40	3. 25	·1104	21. 22	·01680			
3. 20	49. 40	3. 44	·1107	22. 15	·01717			
3. 34	48. 25	3. 53	·1106	22. 33	·01698			
4. 11	48. 45	4. 10	·1110	23. 59	·01720			
4. 27	47. 5	4. 19	·1107					
5. 15	46. 55	5. 0	·1105					
7. 0	47. 0	5. 34	·1111					
8. 41	45. 0	5. 43	·1110					
9. 9	38. 45		***					
9. 19	40. 5	7. 20	·1115					
9. 25	43. 0	7. 57	·1113					
10. 11	44. 30	8. 12	·1115					
10. 21	43. 30	8. 56	·1103					
10. 37	43. 10	9. 17	·1112					
10. 53	41. 25	9. 22	·1112					
11. 0	33. 20	9. 58	·1115					
11. 10	37. 5	10. 30	·1108					
11. 16	36. 45	10. 40	·1120					
11. 22	38. 10	10. 49	·1120					
11. 37	34. 35	11. 2	·1146					
11. 51	40. 0	11. 26	·1107					
11. 57	41. 15	11. 41	·1112					
12. 8	39. 15	11. 59	·1107					
12. 22	40. 30	12. 22	·1114					
12. 33	40. 0	12. 46	·1107					
13. 46	47. 20	13. 5	·1108					
14. 28	47. 0	13. 14	·1107					
14. 43	44. 45	13. 35	·1110					
15. 14	48. 0	13. 43	·1110					
16. 36	47. 55	14. 0	·1113					
	***	14. 8	·1111					
18. 8	47. 35	14. 22	·1115					
18. 53	46. 0	14. 27	·1113					
19. 13	47. 0	14. 37	·1117					
19. 21	45. 30	14. 42	·1114					
19. 31	46. 10	15. 51	·1113					
19. 38	44. 10		***					
19. 52	46. 5	18. 55	·1125					
20. 21	44. 35	19. 38	·1118					
20. 32	46. 5	20. 16	·1116					
21. 26	46. 55	20. 28	·1119					
21. 47	45. 10	20. 47	·1112					
22. 23	47. 40	20. 58	·1112					
22. 40	50. 35	21. 30	·1093					
22. 56	50. 0	22. 13	·1107					
23. 59	52. 35	22. 22	·1105					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar. 7 h m		h m		h m	°	°
		22. 39	·1110					
		22. 57	·1107					
		23. 15	·1098					
		23. 59	·1097					
Mar. 8		Mar. 8		Mar. 8		Mar. 8		
0. 0	20. 52. 35	0. 0	·1097	0. 0	·01720	9. 0	47 ·0	47 ·0
0. 12	55. 50	0. 30	·1107	0. 51	·01733	21. 0	40 ·8	42 ·5
0. 23	55. 55	0. 52	·1100	1. 40	·01780			
0. 30	56. 55	1. 1	·1101	3. 52	·01780			
0. 47	54. 0	1. 39	·1110	8. 20	·01687			
1. 8	54. 0	2. 15	·1108	13. 48	·01680			
1. 13	55. 40	2. 44	·1116	16. 17	·01730			
1. 21	54. 30	2. 54	·1114	19. 2	{·01755			
1. 47	54. 45	3. 7	·1118		·01700			
2. 15	53. 10	3. 18	·1115	20. 13	·01733			
2. 39	53. 35		***	21. 24	·01736			
	***	4. 40	·1116	23. 5	·01765			
6. 6	47. 30	4. 45	·1114	23. 59	·01800			
7. 7	48. 25	4. 57	·1120					
8. 2	48. 35	5. 0	·1115					
9. 11	47. 20		***					
9. 40	48. 0	5. 29	·1121					
10. 56	47. 55	5. 43	·1117					
11. 12	46. 50	6. 3	·1119					
11. 33	47. 35	6. 15	·1117					
11. 45	47. 0	6. 43	·1120					
12. 8	49. 0	7. 23	·1121					
12. 25	47. 20	7. 37	·1118					
12. 56	47. 0	8. 0	·1120					
13. 21	51. 10	8. 20	·1117					
14. 8	48. 55	9. 0	·1119					
14. 33	49. 35	9. 10	·1117					
15. 21	48. 30	9. 25	·1118					
17. 37	48. 35	9. 55	·1115					
17. 52	48. 0	10. 40	·1118					
18. 37	48. 30	10. 47	·1122					
18. 57	46. 25	11. 6	·1121					
19. 51	49. 35	11. 17	·1123					
20. 2	47. 35	11. 25	·1121					
20. 17	50. 20	11. 35	·1122					
20. 43	47. 0	11. 59	·1117					
21. 21	48. 30	12. 7	·1121					
21. 53	47. 25	12. 32	·1123					
22. 20	49. 0	13. 8	·1115					
22. 37	51. 30	13. 29	·1118					
22. 45	51. 25		***					
22. 55	53. 30	14. 28	·1116					
23. 10	52. 30	14. 39	·1118					
23. 22	53. 45	15. 0	·1118					
23. 40	53. 20	15. 11	·1121					
23. 59	55. 40		***					
		15. 37	·1118					
		15. 45	·1121					
		15. 52	·1119					
			***					
		17. 23	·1121					
		17. 47	·1123					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar. 8 h m		h m		h m	°	°
		18. 32	·1122					
		18. 53	·1124					
		19. 25	·1116					
		19. 45	·1116					
		20. 0	·1120					
		20. 9	·1116					
		21. 38	·1111					
		22. 20	·1113					
		22. 33	·1110					
		22. 43	·1113					
		22. 59	·1102					
		23. 24	·1102					
		23. 59	·1113					
Mar. 9		Mar. 9		Mar. 9		Mar. 9		
0. 0	20. 55. 40	0. 0	·1113	0. 0	·01800	1. 0	45 ·3	46 ·0
0. 17	56. 55	0. 27	·1114	0. 18	·01810	3. 0	48 ·5	49 ·1
1. 32	56. 50	0. 35	·1115	2. 28	·01778	9. 0	50 ·5	51 ·0
2. 23	55. 35	0. 49	·1111	2. 48	·01783	21. 0	42 ·0	43 ·0
2. 27	57. 5	1. 46	·1114	5. 0	·01533			
2. 46	57. 10	2. 22	·1126	8. 0	·01310			
3. 15	55. 0	2. 32	·1136	11. 0	·01247			
3. 25	52. 15	2. 58	·1137	12. 48	·01262			
3. 34	52. 40	3. 2	·1142	13. 8	·01255			
3. 56	51. 15	3. 27	·1131	15. 33	{·01320			
4. 10	51. 30	3. 34	·1133		·01350			
5. 13	49. 5	4. 14	·1135	18. 35	·01480			
5. 41	48. 55	4. 37	·1134	21. 26	·01620			
5. 55	49. 25	4. 51	·1133	21. 48	·01630			
6. 4	48. 55	5. 41	·1132	23. 30	·01730			
7. 18	48. 55	5. 57	·1136	23. 59	·01732			
8. 42	47. 50	6. 12	·1129					
10. 25	47. 45	6. 32	·1123					
11. 56	46. 50	7. 30	·1118					
12. 27	47. 30	8. 53	·1121					
12. 40	51. 0	9. 14	·1118					
13. 8	47. 10	10. 23	·1116					
13. 42	46. 55	11. 24	·1117					
14. 8	48. 0	11. 44	·1119					
16. 35	47. 50	12. 23	·1117					
17. 3	49. 5	12. 37	·1125					
17. 20	48. 25	13. 7	·1118					
17. 48	49. 15	13. 38	·1115					
18. 5	48. 45	13. 53	·1116					
18. 15	49. 0	14. 37	·1115					
18. 33	48. 5	17. 38	·1122					
18. 49	49. 15	18. 21	·1126					
19. 49	46. 55	18. 58	·1126					
20. 7	46. 50	20. 2	·1114					
20. 13	47. 50	21. 10	·1105					
20. 45	48. 0	21. 23	·1106					
20. 51	48. 35	21. 35	·1107					
21. 7	48. 25	22. 26	·1100					
22. 11	51. 0	22. 42	·1100					
22. 23	50. 50	23. 7	·1103					
23. 30	56. 15	23. 27	·1102					
23. 43	58. 20	23. 45	·1106					
23. 54	57. 40	23. 53	·1104					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 9		Mar. 9						
h m s	° ′ ″	h m		h m		h m	°	°
23. 59	20. 58. 55	23. 57	·1110 (†)					
Mar. 10		Mar. 10		Mar. 10		Mar. 10		
0. 0	20. 58. 55		(†)	0. 0	·01732	1. 0	45 ·0	46 ·0
0. 7	58. 30	0. 9	·1109	2. 27	·01768	3. 0	48 ·1	48 ·8
0. 21	59. 35	0. 15	·1107	3. 26	·01733	9. 0	49 ·0	49 ·0
0. 29	58. 5	0. 26	·1106	9. 19:	·01343	21. 0	42 ·2	44 ·0
0. 57	58. 30	0. 39	·1101	14. 36	·01375	22. 0	42 ·7	44 ·2
1. 4	59. 0	0. 45	·1106	15. 0	·01370	23. 0	42 ·2	44 ·5
1. 37	57. 35	0. 50	·1101	19. 21	·01558			
1. 51	55. 20	1. 0	·1106	23. 59	·01700			
2. 11	55. 20	1. 10	·1103					
2. 40	54. 30	1. 27	·1107					
3. 26	52. 0	1. 37	·1110					
3. 34	52. 20	1. 49	·1105 ***					
4. 26	49. 50							
5. 7	49. 0	3. 7	·1125					
5. 39	46. 55	3. 23	·1122					
7. 0	48. 35	3. 54	·1121					
8. 55	47. 35	5. 1	·1120 ***					
9. 10	48. 0							
9. 32	46. 55	5. 40	·1116					
10. 20	47. 55	6. 14	·1119					
10. 37	47. 0	6. 23	·1119					
11. 0	47. 55	7. 0	·1124 ***					
11. 22	46. 25 ***	8. 17	·1124					
12. 58	47. 5	9. 7	·1123					
13. 43	46. 5	9. 32	·1128					
14. 23	47. 25	9. 58:	·1122					
14. 42	51. 25	10. 23	·1127					
14. 53	50. 20	11. 5	·1126					
15. 21	47. 0	11. 33	·1124 ***					
15. 30	46. 25							
15. 36	47. 50	13. 6	·1123					
15. 45	47. 0	13. 45	·1127					
16. 42	49. 0	14. 23	·1127					
17. 24	47. 15 ***	14. 44	·1137					
		14. 57	·1132					
18. 7	47. 40 ***	15. 13	·1130					
		15. 17	·1131					
19. 16	46. 0 ***	16. 5:	·1124					
		16. 41	·1130 ***					
19. 42	46. 25							
20. 14	49. 50	18. 23	·1132 ***					
20. 35	54. 5							
21. 23	48. 55	18. 50	·1132					
21. 55	51. 25	19. 7	·1136					
22. 8	50. 20	19. 25	·1132 ***					
22. 37	53. 35							
23. 8	52. 25	19. 44	·1119					
23. 47	53. 55	19. 52	·1119					
23. 52	53. 30	20. 3	·1113					
23. 59	54. 10	20. 14	·1112					
		20. 40	·1120					
		20. 56	·1121					
		21. 20	·1118					
Mar. 11				Mar. 11				
0. 0	20. 54. 10	0. 0	·1119	0. 0	·01700	0. 0	43 ·6	44 ·6
0. 14	56. 0	0. 12	·1119	0. 10	{·01707	1. 0	44 ·4	45 ·5
0. 30	56. 10	0. 21	·1121		·01620	3. 0	47 ·4	48 ·0
0. 56	54. 0	0. 55	·1110	0. 45	·01640	6. 0	48 ·9	48 ·5
1. 8	54. 45	1. 7	·1122	3. 0:	·01682	9. 0	47 ·6	47 ·2
1. 56	54. 10	1. 26	·1126	5. 3	·01520	12. 0	45 ·4	45 ·3
2. 4	53. 30	1. 42	·1132	5. 38	·01475	19. 0	39 ·5	41 ·6
2. 24	53. 55	2. 3	·1129	10. 15	{·01355	21. 0	39 ·2	41 ·0
2. 42	52. 40	2. 16	·1132		·01377	22. 0	39 ·8	41 ·4
2. 56	53. 10	2. 30	·1130	10. 45	·01367	23. 0	41 ·0	42 ·0
3. 15	50. 30	3. 1	·1130	11. 11	·01379			
4. 4	50. 45	3. 16	·1127	11. 45	·01380			
4. 23	49. 45	3. 32	·1131	14. 33	{·01490			
4. 30	50. 0	3. 39	·1130		·01510			
6. 28	48. 40	3. 52	·1134 ***	19. 27	·01733			
8. 0	49. 5			21. 58	{·01770			
8. 15	48. 25	4. 25	·1126		·01660			
8. 50	48. 35	4. 43	·1129	23. 59	·01693			
9. 12	47. 40	5. 2	·1127					
9. 33	47. 35	5. 15	·1128					
9. 38	44. 40	5. 34	·1126					
9. 52	41. 0	5. 47	·1129					
10. 16	44. 5	6. 7	·1126					
10. 36	39. 35	6. 28	·1128					
10. 56	45. 10	6. 52	·1118					
11. 9	46. 0	7. 14	·1125					
11. 34	45. 15	7. 18	·1123					
11. 55	46. 55	7. 40	·1125					
13. 0	46. 25	7. 55	·1129					
13. 39	46. 10	8. 15	·1124					
13. 51	47. 5	8. 25	·1126					
14. 11	47. 35	8. 36	·1125					
14. 21	46. 40	9. 7	·1127					
14. 40	48. 15	9. 22	·1135					
14. 57	48 25	9. 34	·1134					
15. 9	47. 0	10. 3	·1138					
16. 23	49. 0	10. 30	·1122					
16. 40	48. 55	10. 45	·1130					
16. 45	48. 5 ***	11. 15	·1124					
		11. 46	·1125					
17. 21	48. 0	12. 2	·1120					
17. 44	49. 55	12. 9	·1122					
18. 45	48. 0 ***	12. 29	·1119					
		12. 51	·1124					
19. 15	46. 50 ***	12. 56	·1121 ***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 11		Mar. 11						
h m	° ′ ″	h m		h m		h m	°	°
20. 28	20. 46. 30	13. 32	·1122					
	***	13. 42	·1126					
21. 45	47. 20	13. 50	·1122					
22. 23	49. 10	14. 12	·1126					
22. 38	48. 20	14. 44	·1123					
23. 28	51. 5	14. 55	·1128					
23. 59	51. 0	15. 23	·1123					
		15. 53	·1124					
		16. 7	·1127					
		16. 23	·1125					
		16. 37	·1130					
		16. 44	·1128					
		16. 52	·1130					
		17. 0	·1127					
		17. 5	·1130					
		17. 16	·1127					
		17. 24	·1129					
		17. 46	·1128					
		18. 3	·1129					
		18. 27	·1134					
			***					
		19. 11	·1132					
		19. 34	·1133					
		19. 35	·1129					
		19. 52	·1130					
		20. 23	·1124					
		20. 38	·1124					
		20. 55	·1121					
		21. 14	·1121					
		21. 26	·1118					
		21. 32	·1119					
		22. 6	·1114					
		22. 20	·1115					
		22. 40	·1111					
		23. 7	·1119					
		23. 22	·1120					
		23. 34	·1124					
		23. 42	·1124					
		23. 59	·1122					
Mar. 12		Mar. 12		Mar. 12		Mar. 12		
0. 0	20. 51. 0	0. 0	·1122	0. 0	·01693	0. 0	42 ·3	43 ·2
0. 24	52. 30	0. 15	·1128	1. 40	·01690	1. 0	44 ·0	44 ·0
0. 38	51. 5	0. 30	·1127	4. 0	·01593	2. 0	45 ·5	45 ·6
0. 51	54. 25	1. 19	·1129	5. 15	·01560	3. 0	47 ·0	47 ·0
1. 4	51. 20	1. 32	·1134	11. 11	·01480	9. 0	46 ·8	47 ·0
1. 14	50. 50	1. 53	·1134	13. 39	·01492	21. 0	42 ·9	44 ·0
1. 30	51. 55	2. 7	·1136	14. 27	·01468			
	***	2. 37	·1134	15. 38	·01480			
2. 11	51. 50	2. 51	·1139	18. 30	·01600			
2. 38	50. 35	3. 17	·1133	21. 20	·01660			
2. 57	52. 10	3. 28	·1141	22. 11	·01693			
3. 15	50. 0	3. 42	·1135	23. 59	·01703			
3. 25	51. 20	3. 58	·1120					
3. 38	51. 0	4. 10	·1118					
4. 21	47. 30	4. 16	·1120					
4. 57	49. 10	4. 26	·1121					
5. 23	47. 5	4. 44	·1128					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 12		Mar. 12						
h m	° ′ ″	h m		h m		h m	°	°
6. 10	20. 48. 50	5. 11	·1123					
7. 10	49. 30	5. 25	·1125					
9. 30	48. 5	5. 51	·1121					
10. 37	48. 40	6. 17	·1123					
11. 11	47. 0	6. 36	·1127					
11. 41	47. 55	7. 23	·1131					
12. 29	47. 25	7. 37	·1134					
13. 9	46. 5	7. 47	·1133					
13. 25	46. 55	8. 51	·1133					
14. 0	53. 0	9. 9	·1128					
14. 39	46. 30	9. 34	·1127					
15. 31	45. 20	9. 54	·1129					
15. 50	42. 5	10. 19	·1129					
16. 16	44. 30	10. 30	·1133					
16. 37	44. 30	10. 48	·1131					
16. 57	46. 5	11. 0	·1132					
17. 28	46. 50	11. 23	·1127					
20. 16	45. 40	11. 40	·1128					
20. 39	46. 55	11. 53	·1130					
20. 45	46. 20	12. 14	·1127					
21. 21	47. 20	12. 33	·1129					
22. 47	52. 40	12. 48	·1126					
23. 10	52. 55	13. 28	·1124					
23. 25	56. 20	13. 34	·1125					
23. 35	55. 25	13. 40	·1125					
23. 59	57. 0	14. 15	·1138					
		14. 32	·1133					
		14. 47	·1135					
		15. 2	·1131					
		15. 21	·1129					
		15. 34	·1124					
		15. 41	·1125					
		16. 8	·1121					
		16. 20	·1123					
		16. 25	·1122					
		16. 49	·1121					
			***					
		18. 16	·1124					
		18. 23	·1122					
		18. 30	·1123					
		20. 16	·1118					
		20. 23	·1116					
		20. 29	·1117					
		20. 55	·1117					
		21. 23	·1116					
		21. 43	·1118					
			***					
		22. 45	·1113					
		22. 58	·1121					
		23. 9	·1118					
			(†)					
		23. 45	·1116					
		23. 59	·1116					
Mar. 13		Mar. 13		Mar. 13		Mar. 13		
0. 0	20. 57. 0	0. 0	·1116	0. 0	·01703	1. 0	47 ·0	47 ·2
0. 7	56. 25	0. 19	·1112	2. 49	·01678	3. 0	49 ·8	50 ·5
0. 36	58. 55	0. 35	·1119	3. 30	·01647	9. 0	52 ·5	52 ·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 13		Mar. 13		Mar. 13				
h m	° ′ ″	h m		h m		h m	°	°
0. 55	20. 57. 25	1. 10	·1113	4. 22:	·01625	21. 0	43·1	45·0
1. 1	56. 0	1. 25	·1114	5. 18	·01540			
1. 35	54. 0		***	8. 40	·01350			
2. 2	54. 0	2. 57	·1131	9. 53	·01323			
3. 37	50. 0	3. 45	·1127	12. 30:	·01284			
4. 54	48. 35	4. 0	·1129	16. 51	·01430			
5. 22	44. 5	4. 30	·1126	19. 43	·01600			
5. 43	43. 5	4. 45	·1121	21. 39	·01690			
5. 55	44. 0	4. 50	·1124	23. 26	·01815			
6. 8	40. 35	5. 12	·1118	23. 59	·01860			
6. 17	40. 5	5. 24	·1116					
6. 33	41. 30	5. 35	·1120					
6. 45	44. 40	5. 48	·1117					
7. 0	44. 20	5. 58	·1116					
7. 56	47. 55	6. 7	·1110					
10. 6	48. 0	6. 17	·1112					
12. 14	47. 55	6. 44	·1115					
12. 28	49. 0	6. 56	·1111					
12. 54	47. 20	7. 12	·1118					
13. 11	48. 10	7. 25	·1116					
13. 30	47. 30	7. 59	·1114					
15. 26	47. 5	8. 25	·1122					
16. 23	48. 5	8. 36	·1120					
16. 55	46. 50	9. 8	·1119					
17. 21	46. 30	9. 15	·1116					
18. 9	45. 55	9. 56	·1122					
18. 19	46. 35	10. 10	·1121					
18. 37	45. 10	10. 44	·1121					
18. 52	45. 50	10. 52	·1124					
	***	11. 26	·1121					
19. 53	45. 5	11. 50	·1123					
20. 8	46. 30	12. 7	·1122					
	***	12. 15	·1124					
21. 34	48. 30	12. 41	·1124					
21. 51	47. 25	12. 50	·1122					
21. 58	48. 45	14. 30	·1122					
22. 29	48. 50	14. 42	·1124					
23. 53	55. 55	16. 32	·1125					
23. 59	55. 45	16. 55	·1127					
		17. 32	·1125					
		17. 43	·1127					
		18. 29	·1123					
		18. 40	·1124					
			***					
		19. 50	·1118					
		20. 0	·1118					
		20. 26	·1113					
		20. 31	·1114					
		21. 0	·1108					
		21. 22	·1108					
		21. 29	·1111					
		21. 39	·1107					
		21. 46	·1110					
		23. 1	·1107					
		23. 17	·1108					
		23. 38	·1108					
		23. 53	·1109					
		23. 59	·1109					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 14		Mar. 14		Mar. 14		Mar. 14		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 55. 45	0. 0	·1109	0. 0	·01860	1. 0	48·3	48·6
0. 16	54. 40	0. 11	·1109	1. 53	·01800	3. 0	50·9	50·6
0. 50	54. 50	0. 38	·1116	3. 8	·01765	9. 0	51·5	51·0
1. 32	54. 20	0. 42	·1115	4. 9	·01656	22. 43	45·5	47·0
1. 52	53. 15	1. 32	·1116	4. 55	·01583			
1. 59	53. 40	1. 59	·1126	7. 2	·01467			
3. 22	50. 25	2. 58	·1125	8. 38	·01400			
4. 9	50. 20	3. 22	·1130	11. 8	·01344			
4. 35	49. 15	3. 27	·1129	14. 17	·01360			
5. 27	48. 5	3. 45	·1128	18. 38	·01460			
6. 5	48. 25	4. 0	·1129	20. 25	·01535			
6. 21	47. 30	4. 44	·1118	23. 59	·01644			
6. 27	47. 40	5. 10	·1121					
6. 32	47. 5	5. 48:	·1117					
6. 44	49. 20	6. 24	·1122					
7. 2	47. 30	6. 32	·1143					
7. 13	49. 10	6. 56	·1121					
7. 38	49. 5	7. 9	·1130					
8. 22	50. 20	7. 24	·1133					
8. 35	49. 0	7. 31	·1130					
9. 21	48. 20	7. 42	·1134					
10. 40	48. 5	8. 3	·1132					
11. 0	47. 20	8. 25	·1123					
11. 43	47. 0	9. 3	·1130					
12. 34	47. 50	10. 5	·1130					
14. 6	46. 55	10. 14	·1133					
14. 10	47. 25	10. 25	·1132					
14. 51	47. 20	11. 42	·1129					
15. 15	47. 50	11. 55	·1130					
15. 55	46. 15		***					
16. 20	47. 5	13. 0	·1131					
16. 48	46. 55	13. 14	·1129					
17. 7	48. 20	13. 23	·1132					
17. 12	46. 55	13. 38	·1130					
17. 54	48. 0	13. 45	·1132					
18. 6	47. 25	14. 2	·1128					
18. 20	47. 55	14. 11	·1130					
18. 46	46. 15	14. 31	·1126					
18. 55	46. 55	15. 28	·1128					
19. 1	48. 5	15. 52	·1124					
19. 12	47. 10	16. 37	·1125					
19. 18	48. 10	16. 50	·1123					
19. 55	49. 35		***					
20. 24	47. 0	17. 47	·1125					
20. 48	47. 0	17. 56	·1124					
21. 28	48. 0	18. 23	·1125					
22. 12	50. 0		***					
23. 10	51. 45	18. 53	·1127					
23. 11	50. 45	19. 15	·1122					
23. 59	52. 50	19. 56	·1126					
		20. 32	·1121					
		20. 42	·1124					
		21. 22	·1121					
		21. 48	·1122					
		22. 35	·1118					
		23. 0	·1120					
		23. 8	·1116					
		23. 12	·1114					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Mar. 15	
0. 0	20. 52. 50
0. 18	52. 15
0. 38	52. 20
0. 53	52. 0
1. 18	52. 35
2. 18	52. 10
5. 9	48. 20
5. 53	48. 25
6. 8	47. 55
7. 10	47. 55
7. 30	47. 10
7. 49	47. 40
8. 0	47. 30
9. 4	49. 5
10. 23	48. 40
12. 17	48. 30
12. 31	48. 20
12. 48	48. 20
14. 10	48. 55
16. 23	48. 5
18. 46	46. 50
18. 58	46. 0
19. 12	46. 30
19. 31	45. 5
19. 39	46. 0
19. 56	44. 40
20. 7	45. 15
20. 33	44. 50
21. 25	46. 15
22. 37	51. 55
22. 51	52. 0
23. 27	54. 35
23. 46	54. 30
23. 59	55. 40
Mar. 16	
0. 0	20. 55. 40
0. 30	56. 25
0. 49	54. 35
1. 8	55. 0
2. 38	52. 35
2. 44	53. 0
3. 38	50. 5
3. 54	50. 40
4. 6	49. 50
4. 31	50. 5
4. 51	49. 15
5. 38	48. 35
6. 23	48. 35
6. 40	48. 0
6. 57	48. 20
8. 8	47. 10
10. 38	48. 20
11. 9	47. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 14 h m	
23. 45	·1113
23. 59	·1115
Mar. 15	
0. 0	·1115
0. 30	·1113
0. 53	·1114
1. 17	·1118
4. 27	·1118
4. 39	·1120
7. 26	·1124
8. 5	·1127
8. 53	·1125
9. 10	·1126
11. 26	·1126
12. 21	·1124
12. 47	·1126
13. 47	·1124
19. 5	·1127
	***
20. 41	·1125
21. 2	·1121
21. 21	·1122
22. 10	·1117
22. 46	·1108
23. 39	·1108
23. 59	·1114
Mar. 16	
0. 0	·1114
0. 7	·1115
0. 30	·1113
0. 52	·1116
1. 1	·1109
1. 15	·1116
1. 25	·1125
2. 46	·1132
3. 8	·1129
3. 23	·1130
3. 42	·1128
3. 53	·1132
4. 8	·1128
4. 35	·1129
4. 52	·1126
6. 25	·1129
6. 37	·1131
6. 47	·1129

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Mar. 15	
0. 0	·01644
2. 45:	·01690
6. 0	·01670
10. 59	·01677
12. 54	·01720
15. 56	·01820
19. 47	·01883
21. 53	·01872
	·01810
23. 33	·01850
23. 59	·01845
Mar. 16	
0. 0	·01845
0. 46	·01833
1. 57:	·01810
3. 0	·01725
3. 45	·01660
4. 56	·01523
6. 25	·01450
7. 23	·01420
9. 6	·01430
9. 40	·01420
11. 51:	·01325
13. 40	·01327
14. 27	·01330
14. 57	·01357
15. 27	·01363
21. 27	·01633
23. 59	·01743

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 15		
8. 40	47 ·1	48 ·0
21. 0	42 ·8	44 ·0
Mar. 16		
1. 0	47 ·6	48 ·0
3. 0	50 ·0	50 ·5
9. 0	51 ·0	51 ·0
21. 0	43 ·5	45 ·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Mar. 16	
12. 0	20. 48. 0
12. 27	47. 10
13. 15	47. 50
13. 31	50. 5
14. 24	43. 40
14. 44	46. 55
15. 1	47. 55
15. 22	47. 0
15. 30	47. 5
16. 0	45. 45
16. 32	47. 5
16. 50	46. 5
17. 14	47. 0
18. 0	47. 5
18. 10	46. 25
18. 30	48. 10
19. 22	46. 5
19. 25	46. 50
19. 38	44. 55
19. 49	44. 45
19. 55	45. 40
	***
20. 25	46. 10
	***
20. 53	49. 5
21. 0	48. 15
22. 2	54. 25
22. 40	56. 55
23. 19	54. 55
23. 36	55. 5
23. 54	55. 25
23. 59	55. 0
Mar. 17	
0. 0	20. 55. 0
0. 8	54. 45
0. 38	56. 5
0. 44	57. 0
0. 55	56. 5
1. 36	55. 0
2. 5	55. 20
2. 22	54. 0
2. 34	56. 0
2. 55	55. 5
3. 7	53. 25
3. 12	53. 45
3. 40	51. 0
4. 3	51. 45
4. 15	51. 5
4. 20	50. 0
4. 25	51. 0
4. 45	50. 0
5. 1	47. 50
5. 29	47. 15
5. 41	46. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 16 h m	
7. 23	·1131
7. 37	·1137
	***
9. 0	·1133
9. 21	·1138
9. 37	·1134
10. 45	·1130
11. 50	·1130
12. 3	·1133
12. 18	·1130
13. 0	·1133
13. 23	·1131
14. 0	·1136
14. 27	·1125
14. 47	·1128
15. 20	·1132
15. 29	·1131
15. 42	·1133
16. 13	·1130
	***
17. 0	·1131
17. 15	·1129
18. 3	·1132
18. 20	·1129
18. 48	·1129
19. 22	·1127
19. 40	·1130
20. 53	·1119
21. 12	·1118
21. 33	·1114
22. 3	·1117
22. 22	·1112
22. 36	·1115
23. 11	·1107
	(†)
Mar. 17	
0. 0	·1114
0. 31	·1125
0. 48	·1127
1. 36	·1120
2. 0	·1122
2. 22	·1121
2. 30	·1128
2. 52	·1127
3. 8	·1121
3. 13	·1132
3. 30	·1128
	**
4. 8	·1131
4. 24	·1124
4. 30	·1126
4. 55	·1120
5. 20	·1128
5. 39	·1126
5. 57	·1129
6. 17	·1139
6. 31	·1133

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Mar. 17	
0. 0	·01743
1. 10	·01750
2. 15	·01710
4. 0	·01620
10. 38:	·01315
16. 20	·01533
17. 56	·01622
20. 12	·01695
21. 38	·01710
23. 59	·01850

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Mar. 17		
1. 0	47 ·8	48 ·5
3. 0	51 ·2	51 ·5
9. 0	51 ·5	52 ·0
21. 0	41 ·2	43 ·0
22. 0	41 ·5	43 ·0
23. 0	42 ·5	44 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 17		Mar. 17						
h m	° ′ ″	h m		h m		h m	°	°
5. 53	20. 46. 45	6. 49	·1130					
6. 9	43. 5	7. 8	·1133					
6. 37	40. 40	7. 30	·1126					
6. 59	41. 15	7. 53	·1123					
7. 22	45. 40	8. 24	·1126					
7. 29	44. 40	8. 37	·1125					
7. 50	47. 40	9. 9	·1127					
8. 8	48. 30	9. 53	·1123					
8. 15	47. 10	10. 42	·1121					
8. 32	48. 5	13. 7	·1120					
9. 11	48. 20	13. 40	·1121					
11. 4	47. 25	15. 3	·1120					
11. 46	48. 0	15. 26	·1120					
13. 37	47. 15	15. 50	·1118					
13. 45	48. 35	17. 12	·1120					
14. 40	47. 15	17. 38	·1121					
15. 12	48. 15	18. 40	·1119					
15. 35	47. 10	19. 49	·1112					
16. 23	48. 55	20. 0	·1113					
19. 39	44. 10	20. 41	·1110					
19. 58	42. 30		(†)					
20. 8	43. 35	22. 19	·1106					
20. 36	43. 40	22. 53	·1105					
20. 54	44. 15	23. 59	·1112					
21. 0	43. 45							
22. 40	51. 50							
23. 30	54. 40							
23. 59	55. 20							
Mar. 18		Mar. 18		Mar. 18		Mar. 18		
0. 0	20. 55. 20	0. 0	·1112	0. 0	·01850	0. 0	44 ·0	45 ·3
0. 48	55. 15	0. 20	·1112	3. 8	·01760	1. 0	45 ·0	46 ·0
1. 34	55. 5	0. 39	·1116	3. 14:	·01767	2. 0	46 ·8	47 ·6
2. 7	54. 0	0. 51	·1114	4. 51	·01617	3. 0	47 ·4	48 ·1
2. 31	52. 30	1. 8	·1116	6. 4	·01500	6. 0	49 ·0	49 ·0
2. 49	52. 50	1. 29	·1116	8. 0	·01427	9. 0	49 ·0	49 ·0
3. 7	51. 0	1. 40	·1119	9. 3	·01430	12. 0	48 ·0	48 ·0
3. 30	50. 55	2. 32	·1119	9. 30	·01430	18. 0	44 ·0	45 ·1
3. 54	48. 55	2. 57	·1124	12. 41:	·01360	21. 0	45 ·2	44 ·8
4. 32	48. 50	3. 19	·1124	15. 51	·01470	22. 0	45 ·0	45 ·4
5. 35	47. 50	3. 33	·1134	18. 28	·01580	23. 0	44 ·8	46 ·0
6. 0	48. 40	3. 57	·1129	19. 0	·01620			
6. 16	48. 0	4. 10	·1131	20. 0	·01660			
6. 56	48. 35	5. 2	·1128	21. 18	·01690			
8. 26	47. 45	5. 32	·1129	22. 55	{·01750			
9. 53	48. 0	6. 18	·1129		{·01680			
10. 5	47. 0	6. 31	·1130	23. 59	·01693			
10. 24	47. 0	6. 44	·1128					
10. 41	46. 15	6. 57	·1129					
11. 12	47. 50	7. 9	·1128					
12. 7	47. 10	7. 50	·1128					
12. 25	48. 0	8. 34	·1130					
14. 55	47. 30	9. 0	·1128					
15. 18	48. 20	9. 25	·1128					
15. 43	47. 0	9. 32	·1130					
15. 59	48. 0	9. 53	·1125					
16. 22	47. 20	10. 5	·1128					
16. 54	48. 0	10. 27	·1124					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 18		Mar. 18						
h m	° ′ ″	h m		h m		h m	°	°
17. 57	20. 46. 0	15. 24	·1131					
18. 18	45. 50	16. 32	·1131					
19. 9	44. 5	17. 33	·1133					
20. 0	43. 20	18. 9	·1132					
20. 15	42. 5	18. 49	·1127					
20. 39	43. 35	18. 59	·1128					
21. 38	44. 20	19. 20	·1127					
22. 52	50. 0	19. 30	·1123					
23. 19	53. 55	20. 4	·1120					
23. 36	53. 0	20. 20	·1122					
23. 59	55. 0	21. 6	·1114					
			***					
		22. 23	·1109					
		22. 56	·1112					
		23. 15	·1122					
		23. 31	·1112					
		23. 46	·1113					
		23. 55	·1115					
		23. 59	·1114					
Mar. 19		Mar. 19		Mar. 19		Mar. 19		
0. 0	20. 55. 0	0. 0	·1114	0. 0	·01693	0. 0	46 ·5	47 ·6
0. 30	58. 5	0. 11	·1118	3. 35	·01573	1. 0	47 ·8	48 ·8
0. 40	56. 35	0. 22	·1118	4. 26	·01500	3. 0	50 ·2	51 ·0
1. 37	55. 0	0. 32	·1114	6. 15	{·01367	9. 0	52 ·0	51 ·7
1. 54	55. 25	0. 40	·1115		{·01400	21. 0	46 ·0	47 ·0
2. 24	55. 0	1. 15	·1117	11. 7:	·01290			
2. 53	53. 40	1. 34	·1118	15. 30	·01390			
4. 31	50. 40	2. 0	·1122	18. 10	·01500			
5. 22	49. 0	2. 37	·1128	22. 30	{·01755			
6. 28	48. 25		***		{·01643			
7. 32	48. 50	3. 44	·1127	23. 4	{·01645			
7. 45	48. 25	4. 0	·1135		{·01680			
10. 23	48. 5	4. 36	·1135	23. 59	·01650			
10. 55	47. 25	5. 32	·1131					
12. 8	48. 0	6. 25	·1132					
12. 26	47. 25	7. 24	·1134					
14. 4	48. 0	9. 35	·1134					
16. 37	47. 10	9. 45	·1132					
16. 52	47. 40	10. 20	·1132					
18. 36	46. 25	10. 32	·1133					
19. 49	43. 30	10. 53	·1131					
20. 7	43. 45		***					
20. 22	43. 0	14. 2	·1127					
20. 34	43. 55	14. 18	·1129					
20. 42	43. 5	14. 44	·1128					
21. 50	45. 30	16. 21	·1128					
22. 51	50. 0	18. 19	·1126					
22. 57	49. 20	19. 24	·1122					
23. 47	53. 0	21. 38	·1107					
23. 59	53. 0	21. 59	·1108					
		22. 21	·1106					
		23. 11	·1105					
		23. 43	·1108					
		23. 54	·1111					
		23. 59	·1110					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 20		Mar. 20		Mar. 20		Mar. 20		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 53. 0	0. 0	·1110	0. 0	·01650	1. 0	50·0	51·0
0. 12	53. 40		(†)	2. 45	·01620	3. 0	53·0	53·5
0. 37	54. 10	0. 57	·1114	3. 32	·01577	9. 0	54·0	53·8
1. 5	55. 0	2. 8	·1117	4. 44	·01433	21. 0	49·0	49·0
2. 7	54. 30	2. 19	·1114	5. 38	·01400			
4. 5	51. 5		***	6. 59	·01330			
4. 13	52. 5	3. 24	·1118	7. 25	·01330			
4. 46	50. 45	3. 46	·1125	7. 48	·01315			
5. 10	50. 40	4. 9	·1122	9. 10	·01323			
5. 24	49. 30	4. 15	·1127	11. 7	·01285			
6. 22	49. 55	4. 31	·1123	13. 0	·01280			
7. 15	48. 25	4. 44	·1122	18. 23	{·01395			
7. 33	50. 25	5. 13	·1123		{·01645			
8. 10	46. 0	5. 27	·1116	22. 10	·01647			
8. 30	46. 30	5. 45	·1122	22. 12	·01660			
8. 40	44. 35	6. 0	·1121	22. 38	·01630			
9. 1	44. 0	6. 10	·1118	23. 13	·01628			
9. 24	46. 0	6. 24	·1123		(†)			
10. 2	46. 5	6. 39	·1124					
10. 40	47. 30	7. 2	·1108					
11. 10	47. 5	7. 29	·1124					
11. 20	46. 25	8. 3	·1107					
11. 30	47. 15	8. 10	·1107					
11. 40	47. 5	8. 31	·1101					
12. 37	50. 25	8. 39	·1102					
13. 7	46. 50	8. 57	·1096					
14. 9	47. 15	9. 15	·1104					
14. 24	46. 5	9. 30	·1102					
14. 47	46. 20	9. 53	·1105					
15. 0	45. 10	10. 45	·1114					
15. 15	45. 55	11. 15	·1111					
15. 44	45. 15	11. 29	·1113					
16. 0	47. 30		***					
16. 20	45. 10	12. 12	·1113					
16. 26	46. 0	12. 37	·1121					
16. 56	42. 40	13. 12	·1113					
17. 3	44. 5	13. 28	·1117					
17. 8	41. 50	13. 38	·1115					
17. 47	38. 55		***					
18. 9	38. 10	15. 56	·1114					
18. 30	43. 10	16. 6	·1118					
18. 40	42. 30	16. 22	·1121					
19. 5	43. 20	17. 4	·1117					
19. 14	47. 0	17. 21	·1122					
19. 23	46. 15	17. 45	·1122					
19. 31	43. 0		***					
19. 50	42. 30	18. 38	·1108					
20. 0	41. 0	19. 0	·1112					
20. 11	42. 45	19. 8	·1122					
20. 16	44. 30	19. 19	·1114					
20. 37	41. 0	19. 37	·1118					
20. 40	42. 45	19. 50	·1112					
	***	19. 58	·1115					
21. 21	42. 35		***					
	***	20. 20	·1107					
21. 30	48. 10		***					
22. 0	47. 30	20. 43	·1108					
22. 23	49. 15	20. 58	·1112					
	(†)							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 20		Mar. 20				Mar. 21		
h m	° ′ ″	h m		h m		h m	°	°
23. 7	20. 56. 40	21. 7	·1106					
23. 19	57. 20	21. 31	·1103					
23. 39	59. 55	21. 42	·1106					
23. 46	20. 59. 0	21. 55	·1098					
23. 56	21. 1. 5	22. 17	·1096					
23. 59	0. 30		(†)					
		23. 2	·1096					
		23. 13	·1094					
		23. 52	·1101					
		23. 59	·1098					
Mar. 21		Mar. 21		Mar. 21		Mar. 21		
0. 0	21. 0. 30	0. 0	·1098	1. 0	·01301*	1. 0	52·0	53·0
0. 8	20. 59. 40	0. 11	·1111	3. 0	·01106*	3. 0	53·5	54·6
0. 18	21. 3. 5	0. 18	·1104	9. 0	·00176*	9. 0	53·5	54·0
0. 28	20. 58. 30	0. 25	·1109	22. 0	·00641*	22. 0	44·5	45·0
0. 32	21. 1. 0	0. 35	·1109		(†)			
0. 38	0. 35		(†)	23. 45	·00970			
0. 51	2. 55	1. 0	·1111*	23. 59	·00988			
0. 57	1. 30	2. 5	·1121					
1. 6	21. 2. 5	2. 23	·1126					
1. 33	20. 56. 30	2. 34	·1131					
2. 11	20. 59. 50	2. 46	·1123					
2. 15	21. 1. 30	2. 54	·1127					
2. 22	20. 59. 45	3. 16	·1112					
2. 38	21. 2. 0	3. 29	·1123					
2. 41	4. 25	3. 38	·1116					
2. 57	1. 30	3. 58	·1135					
3. 3	21. 3. 0	4. 13	·1101					
3. 26	20. 59. 35	4. 29	·1122					
3. 38	21. 1. 40	4. 37	·1118					
3. 45	20. 59. 10	4. 39	·1122					
3. 56	21. 2. 55	4. 49	·1114					
4. 6	21. 1. 25	5. 15	·1112					
4. 15	20. 58. 30	5. 23	·1120					
4. 41	57. 5	5. 38	·1104					
4. 51	52. 30	5. 44	·1122					
4. 55	54. 25	5. 52	·1086					
5. 30	49. 40	6. 7	·1109					
5. 39	57. 30	6. 22	·1076					
5. 53	51. 40	6. 23	·1079					
5. 59	57. 15	6. 30	·1086					
6. 17	37. 40	6. 35	·1082					
6. 30	49. 35	6. 40	·1084					
6. 42	42. 5	6. 48	·1081					
6. 50	42. 35	6. 55	·1086					
7. 10	40. 0	7. 10	·1092					
7. 26	48. 45	7. 22	·1081					
7. 34	47. 55		(†)					
7. 47	42. 40	7. 47	·1077					
7. 53	44. 5	8. 0	·1117					
8. 3	42. 35	8. 14	·1075					
8. 7	37. 30		(†)					
8. 18	54. 0	9. 0	·1094					
8. 36	35. 40	9. 21	·1108					
8. 43	39. 50	9. 38	·1087					
9. 1	37. 20		(†)					
9. 15	31. 40	10. 51	·1089					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

March 21. The case surrounding the Vertical Force box was removed, and the supports of the box were thoroughly examined on this day. During this examination, an alteration in the position of the magnet seems to have occurred, producing a decrease in the scale reading of 2$^{div.}$ or 3$^{div.}$, or of 0·003 or 0·004 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 21		Mar. 21						
h m	° ′ ″	h m		h m		h m	°	°
9. 25	20. 28. 25	11. 48	·1096					
9. 41	37. 0	12. 7	·1105					
9. 46	36. 10	12. 21	·1098					
10. 0	30. 30	12. 45	·1100					
10. 10	31. 25	12. 56	·1096					
10. 34	37. 30	13. 29	·1103					
11. 1	45. 40	13. 39	·1100					
	***	13. 51	·1100					
11. 55	47. 30	14. 32	·1107					
12. 8	47. 30	14. 37	·1094					
12. 18	44. 15		(†)					
12. 30	46. 50	16. 30	·1096					
12. 43	45. 0	16. 53	·1096					
12. 56	44. 20	17. 3	·1100					
13. 2	46. 0	17. 38	·1103					
13. 7	44. 30	17. 48	·1102					
13. 21	45. 0	18. 32	·1103					
13. 26	47. 0	18. 43	·1101					
14. 6	46. 5	19. 13	·1103					
14. 36	38. 35	19. 45	·1101					
	(†)	20. 30	·1093					
16. 25	48. 5	20. 53	·1093					
16. 47	45. 40	21. 8	·1088					
17. 19	43. 40	21. 15	·1089					
17. 38	44. 30	21. 36	·1088					
17. 53	44. 5	21. 47	·1088					
	***	22. 1	·1082					
18. 26	46. 55	22. 26	·1084					
18. 47	45. 25	22. 38	·1080					
18. 57	46. 10	22. 47	·1085					
19. 24	47. 0	22. 54	·1082					
19. 32	45. 55	23. 8	·1087					
19. 45	47. 5	23. 15	·1086					
19. 57	46. 0	23. 25	·1084					
20. 16	45. 55	23. 52	·1094					
	***	23. 59	·1094					
20. 45	47. 0							
21. 9	46. 5							
21. 15	47. 0							
21. 38	47. 10							
22. 45	55. 10							
22. 53	55. 0							
23. 6	56. 30							
23. 25	56. 5							
23. 39	57. 5							
23. 59	56. 20							
Mar. 22		Mar. 22		Mar. 22		Mar. 22		
0. 0	20. 56. 20	0. 0	·1094	0. 0	·00988	9. 0	55 ·0	56 ·0
0. 16	55. 0	0. 16	·1093	2. 0	·01093	21. 0	50 ·9	51 ·2
0. 39	56. 15	0. 38	·1102	2. 27	·01087			
1. 13	56. 0	1. 1	·1103	5. 18	·00840			
1. 24	56. 35	1. 17	·1097	6. 24	·00805			
2. 0	52. 45	1. 26	·1102	6. 53	·00750			
2. 15	52. 40	2. 2	·1102	8. 37	·00608			
2. 26	54. 35	2. 14	·1103	9. 45	·00575			
2. 55	53. 0	2. 30	·1110	10. 55	·00500			
3. 11	51. 30	2. 52	·1103	11. 22	·00445			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 22		Mar. 22		Mar. 22				
h m	° ′ ″	h m		h m		h m	°	°
3. 35	20. 52. 55	3. 14	·1101	11. 54	·00427			
4. 35	51. 55	3. 37	·1106	15. 10	·00470			
5. 4	52. 0		***	17. 30	·00525			
5. 15	50. 15	5. 7	·1105	20. 14	·00663			
5. 38	50. 0	5. 20	·1099		(†)			
5. 57	49. 20	5. 29	·1099	21. 0	·00771*			
6. 4	45. 0	5. 59	·1083	23. 59	·00900			
6. 11	43. 35	6. 30	·1108					
6. 17	41. 5	6. 52	·1095					
6. 28	41. 45	7. 9	·1102					
6. 46	47. 30	7. 21	·1100					
7. 6	45. 35	7. 45	·1104					
7. 22	47. 55	7. 53	·1102					
7. 31	47. 25	8. 10	·1108					
7. 47	49. 0	8. 30	·1090					
7. 56	47. 0	8. 44	·1093					
8. 4	46. 10	9. 9:	·1086					
8. 16	50. 45	9. 44	·1101					
8. 35	48. 35	9. 55	·1099					
9. 9	46. 10	10. 7	·1100					
9. 22	46. 45	10. 15	·1097					
9. 36	46. 0	10. 36	·1095					
9. 47	47. 0	10. 44	·1107					
9. 58	46. 0	11. 7	·1116					
10. 12	47. 40	11. 22	·1096					
10. 23	47. 0	11. 38	·1103					
10. 27	47. 15	11. 54	·1082					
10. 37	45. 20	12. 7	·1094					
10. 42	48. 25	12. 15	·1093					
10. 47	47. 0	12. 24	·1087					
10. 58	43. 0	12. 33	·1090					
11. 15	43. 50	12. 45	·1086					
11. 28	39. 55	12. 55	·1092					
11. 37	42. 40	13. 6	·1086					
11. 49	43. 35	13. 20	·1090					
11. 54	40. 20	13. 45	·1086					
12. 6	43. 5	15. 3	·1092					
12. 26	41. 50	15. 18	·1090					
12. 41	37. 30	15. 32	·1092					
12. 52	38. 30		(†)					
13. 1	36. 35	17. 36	·1093					
13. 25	35. 30	18. 2	·1092					
13. 39	39. 25	18. 19	·1094					
13. 58	38. 5	18. 45	·1090					
14. 23	41. 0		***					
14. 55	42. 0	20. 37	·1091					
15. 0	43. 35	21. 0	·1081					
15. 22	43. 55	21. 25	·1080					
15. 47	46. 0	21. 38	·1088					
16. 14	44. 5	22. 0	·1091					
16. 35	43. 55	22. 40	·1089					
16. 45	45. 10	23. 18	·1091					
17. 55	46. 5	23. 30	·1095					
18. 10	44. 30	23. 59	·1096					
18. 18	45. 30							
19. 9	45. 35							
19. 54	43. 25							
20. 22	44. 20							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

March 21. The photographic cylinder, around which the paper is wrapped for recording the Horizontal Force and Declination traces, was stopped from $14^h.36^m$ to $16^h.25^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 22								
h m	° ′ ″	h m		h m		h m	°	°
20. 32	20. 43. 30							
20. 41	45. 0							
20. 55	44. 5							
21. 24	47. 0							
21. 56	47. 5							
	***							
22. 35	49. 20							
22. 55	51. 30							
23. 40	56. 0							
23. 49	55. 10							
23. 53	56. 50							
23. 59	57. 5							
Mar. 23		Mar. 23		Mar. 23		Mar. 23		
0. 0	20. 57. 5	0. 0	·1096	0. 0	·00900	1. 0	53 ·5	54 ·8
0. 13	57. 0	0. 23	·1099	2. 0	·00883	3. 0	57 ·0	59 ·8
0. 21	58. 20	0. 37	·1096	4. 47	·00547	9. 0	61 ·0	62 ·0
0. 37	56. 35		***	5. 51	·00490	21. 0	52 ·6	53 ·0
0. 52	56. 5	1. 35	·1108	6. 5	·00497			
0. 56	54. 20	1. 48	·1101	6. 24	·00475			
1. 17	58. 0	2. 22	·1122	7. 10	·00457			
1. 30	58. 35	2. 46	·1120	7. 39	·00478			
1. 45	56. 5	3. 8	·1105	8. 44	·00470			
2. 6	58. 15	3. 26	·1110		(†)			
2. 11	57. 40	3. 31	·1106	9. 0	·00454*			
2. 16	58. 55	3. 42	·1104	10. 4	·00380			
2. 27	57. 40	3. 51	·1108	10. 45	·00398			
2. 38	57. 35	3. 56	·1105	11. 9	·00340			
3. 2	53. 10	4. 3	·1113	11. 39	·00340			
3. 20	56. 10	4. 13	·1115	12. 20	·00387			
3. 30	53. 35	4. 22	·1112	13. 19	·00418			
3. 39	53. 0	4. 43	·1121	13. 40	·00412			
3. 47	53. 35	4. 57	·1111	14. 15	·00453			
4. 20	51. 45	5. 24	·1138		(†)			
4. 26	52. 50	5. 32	·1134	21. 0	·00820*			
4. 37	53. 20	5. 43	·1137	21. 36	·00765			
4. 50	51. 55	6. 1	·1118	23. 4	·00810			
4. 55	49. 0	6. 15	·1130	23. 59	·00797			
5. 15	45. 5	6. 30	·1106					
5. 22	46. 40	6. 48	·1120					
5. 26	46. 0		***					
5. 38	47. 55	7. 7	·1119					
6. 6	40. 30	7. 23	·1112					
6. 22	45. 0	7. 49	·1115					
6. 30	41. 5	7. 55	·1121					
6. 42	40. 20	8. 9	·1104					
6. 56	46. 20	8. 22	·1102					
7. 6	47. 30	8. 41	·1120					
7. 26	43. 55	8. 47	·1114					
7. 35	45. 30	9. 3	·1110					
7. 50	40. 0	9. 28	·1098					
7. 54	42. 5	9. 46	·1106					
8. 5	44. 45	10. 1	·1100					
8. 9	43. 30	10. 13	·1089					
8. 15	43. 40	10. 20	·1093					
8. 23	41. 50	10. 28	·1089					
8. 35	41. 30	10. 52	·1150					
8. 39	43. 50	11. 6	·1124					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 23		Mar. 23						
h m	° ′ ″	h m		h m		h m	°	°
8. 54	20. 42. 25	11. 38	·1102					
8. 58	40. 55	12. 22	·1106					
9. 21	38. 40	12. 30	·1103					
9. 31	39. 30	12. 39	·1104					
9. 43	44. 0	12. 52	·1096					
10. 0	45. 40	13. 11	·1108					
10. 21	39. 45	13. 38	·1101					
10. 30	39. 5	13. 51	·1109					
10. 45	30. 20	14. 23	·1099					
11. 1	44. 10	14. 45	·1103					
11. 10	43. 0	15. 5	·1101					
11. 21	44. 35		***					
12. 5	36. 0	15. 54	·1101					
13. 6	40. 10	16. 15	·1103					
13. 23	47. 5	17. 1	·1095					
13. 40	41. 45	17. 26	·1093					
14. 4	42. 35	17. 59	·1097					
14. 23	39. 25	18. 9	·1096					
14. 33	41. 15	18. 48	·1101					
14. 53	41. 0	19. 2	·1097					
15. 6	39. 5	19. 25	·1099					
16. 3	41. 0	19. 55	·1096					
17. 0	43. 40	20. 5	·1090					
17. 14	46. 0	20. 58	·1088					
17. 33	47. 15	21. 37	·1094					
17. 43	46. 25	22. 41	·1097					
17. 54	48. 0	23. 8	·1102					
18. 3	46. 55	23. 26	·1099					
18. 34	46. 35	23. 59	·1098					
18. 39	47. 20							
18. 50	45. 0							
18. 54	46. 55							
19. 7	43. 50							
19. 18	44. 40							
19. 45	44. 5							
19. 53	44. 55							
20. 0	43. 25							
20. 15	43. 10							
20. 32	45. 0							
21. 7	44. 20							
22. 9	48. 40							
22. 24	51. 0							
23. 1	53. 0							
23. 59	53. 45							
Mar. 24		Mar. 24		Mar. 24		Mar. 24		
0. 0	20. 53. 45	0. 0	·1098	0. 0	·00797	1. 0	56 ·3	57 ·0
0. 38	56. 55	0. 6	·1098	0. 54	·00742	3. 0	58 ·5	59 ·0
0. 53	55. 10	0. 26	·1102	2. 12	·00724	9. 0	59 ·8	59 ·7
1. 9	54. 35	0. 31	·1100	4. 8	·00467	21. 0	49 ·8	50 ·0
1. 30	55. 40	0. 42	·1103	5. 34	·00440	22. 0	49 ·9	50 ·0
1. 49	52. 55	0. 52	·1098	6. 5	·00443	23. 0	50 ·5	51 ·0
2. 3	53. 0	1. 9	·1098	8. 0	·00360			
2. 25	51. 5	1. 37	·1103	10. 27	·00318			
2. 50	52. 20	1. 52	·1097	11. 27	·00327			
3. 0	51. 10	2. 6	·1101	12. 25	·00320			
3. 14	52. 15	2. 20	·1098	15. 13	·00466			
3. 52	49. 40	2. 55	·1106	17. 14	·00650			
					(†)			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.24		Mar.24		Mar.24				
h m	° ′ ″	h m		h m		h m	°	°
4. 5	20. 51. 0	3. 7	·1104	21. 0	·00820*			
4. 11	50. 0	3. 22	·1107					
4. 19	51. 0	3. 53	·1097					
4. 52	49. 55	4. 12	·1102					
5. 6	50. 35	4. 19	·1101					
5. 26	47. 25	4. 32	·1104					
5. 33	42. 55	4. 55	·1102					
5. 52	39. 30	5. 13	·1105					
6. 19	45. 55	5. 37	·1092					
6. 32	43. 10	6. 17	·1109					
6. 48	45. 30	6. 31	·1101					
7. 9	45. 50	6. 46	·1107					
7. 48	46. 30	7. 1	·1099					
8. 0	47. 30	7. 22	·1100					
8. 9	46. 40	7. 27	·1099					
8. 22	48. 5	7. 52	·1099					
8. 34	47. 0	8. 5	·1092					
8. 49	47. 30	8. 13	·1095					
9. 16	45. 35	8. 26	·1090					
9. 27	46. 45	8. 46	·1095					
	***	9. 11	·1089					
9. 53	49. 10	9. 25	·1095					
10. 8	47. 0	9. 58	·1093					
10. 15	41. 55	10. 12	·1086					
10. 26	43. 10	10. 23	·1094					
10. 36	43. 50	10. 38	·1090					
10. 39	44. 35	11. 8	·1089					
11. 2	42. 45	11. 46	·1112					
11. 16	42. 50	12. 0	·1100					
11. 23	41. 0	12. 9	·1101					
11. 35	43. 0	12. 21	·1094					
11. 47	41. 0	12. 37	·1098					
11. 59	43. 45	12. 47	·1097					
12. 11	41. 35	13. 1	·1093					
12. 21	41. 5	13. 34	·1095					
12. 38	38. 30	13. 47	·1094					
13. 7	43. 35	14. 25	·1097					
	***	14. 43	·1100					
14. 8	40. 0	15. 11	·1098					
14. 19	42. 20	15. 30	·1107					
14. 35	41. 10	16. 2	·1113					
14. 43	43. 10	16. 15	·1109					
14. 53	41. 55	16. 23	·1110					
15. 0	44. 45	17. 2	·1102					
15. 14	44. 10	17. 26	·1106					
15. 37	47. 0	17. 31	·1103					
15. 58	42. 10	17. 41	·1103					
16. 48	43. 55	18. 11	·1093					
17. 11	42. 50	18. 23	·1096					
	***	18. 48	·1091					
17. 49	45. 0		***					
18. 25	47. 55	19. 52	·1093					
18. 39	45. 5	20. 1	·1097					
18. 49	48. 10	20. 12	·1093					
19. 9	48. 25	20. 20	·1096					
19. 35	49. 40	20. 26	·1097					
	***	20. 45	·1093					
20. 10	47. 0	21. 3	·1093					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.24		Mar.24						
h m	° ′ ″	h m		h m		h m	°	°
20. 16	20. 47. 25	21. 22	·1098					
20. 24	46. 40	21. 44	·1092					
20. 53	47. 45	22. 12	·1091					
21. 22	46. 0		***					
	***	22. 45	·1092					
22. 2	49. 50	23. 5	·1089					
22. 30	51. 0	23. 15	·1084					
	***	23. 52	·1104					
23. 26	55. 20	23. 59	·1102					
23. 47	52. 25							
23. 59	54. 25							
Mar.25		Mar.25		Mar.25		Mar.25		
0. 0	20. 54. 25	0. 0	·1102		(†)	0. 0	52 ·0	52 ·0
0. 15	56. 5		(†)	1. 0	·00978*	1. 0	52 ·9	54 ·0
0. 33	57. 15	0. 28	·1101	1. 13	·00987	2. 0	54 ·2	55 ·2
0. 58	57. 25	0. 42	·1100	2. 8	·00943	3. 0	55 ·5	56 ·5
1. 6	56. 10	1. 4	·1101	2. 53	·00930	6. 0	58 ·0	58 ·7
1. 42	58. 55	1. 5	·1098	4. 54:	·00680	9. 0	58 ·2	58 ·8
2. 1	57. 55	1. 33	·1097	6. 31	·00617	12. 0	56 ·5	57 ·0
2. 27	54. 20	1. 44	·1102	7. 38:	·00493	18. 0	51 ·2	51 ·0
2. 45	57. 0	2. 20	·1089	10. 25	·00460	21. 0	49 ·5	49 ·5
2. 56	56. 55	2. 29	·1088	10. 48	·00440	22. 0	50 ·2	50 ·6
3. 5	54. 50	2. 43	·1089	15. 0	·00605	23. 0	51 ·2	51 ·8
3. 34	52. 25	3. 8	·1103	16. 40	·00747			
4. 25	50. 40	3. 44	·1088	18. 35	·00870			
5. 9	50. 50	4. 57	·1107	20. 55	·00945			
5. 30	49. 5	5. 23	·1107		(†)			
5. 53	49. 30	5. 36	·1106	21. 0	·00930*			
6. 16	47. 35	5. 48	·1107					
6. 29	48. 50	6. 23	·1097					
6. 47	36. 35	6. 47	·1105					
6. 58	40. 40	7. 2	·1133					
7. 4	40. 25	7. 30	·1104					
7. 18	44. 55	7. 38	·1112					
7. 26	42. 50	7. 47	·1094					
7. 34	48. 30	8. 7	·1092					
7. 52	48. 15	8. 38	·1102					
8. 6	47. 10	8. 53	·1103					
9. 7	47. 45	9. 15	·1100					
9. 32	45. 55	9. 25	·1101					
9. 48	42. 5	9. 45	·1095					
10. 0	43. 5	9. 52	·1095					
10. 17	49. 35	10. 4	·1090					
10. 23	48. 40	10. 9	·1093					
10. 36	54. 25	10. 17	·1089					
10. 51	49. 35	10. 28	·1105					
11. 7	41. 0	10. 46	·1094					
11. 27	39. 0	11. 10	·1090					
11. 57	40. 35	11. 37	·1104					
12. 8	39. 20	12. 0	·1099					
12. 22	41. 0	12. 5	·1099					
12. 35	40. 50	12. 19	·1092					
12. 48	42. 20	12. 29	·1092					
13. 0	42. 50	12. 50	·1100					
13. 24	41. 30	13. 44	·1100					
13. 51	42. 30	14. 1	·1102					
14. 12	40. 0	14. 16	·1098					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar.25		Mar.25						
h m	° ′ ″	h m		h m		h m	°	°
14. 50	20. 47. 5	14. 36	·1097					
15. 21	38. 0	15. 6	·1097					
15. 35	38. 30	15. 29	·1101					
15. 45	41. 20	15. 53	·1101					
16. 7	41. 40	16. 8	·1104					
16. 22	40. 5	16. 32	·1105					
	***	16. 46	·1103					
17. 37	45. 0	16. 58	·1104					
18. 0	44. 0	17. 29	·1101					
	***	18. 0	·1101					
19. 14	42. 10	19. 20	·1103					
19. 22	43. 30	19. 53	·1098					
	***	20. 7	·1098					
19. 57	42. 35	20. 29	·1096					
20. 42	44. 25	20. 46	·1098					
20. 54	46. 5	20. 57	·1096					
21. 8	45. 35	21. 5	·1099					
22. 3	51. 20	21. 22	·1091					
22. 11	50. 40	21. 34	·1092					
22. 16	52. 25		***					
22. 53	53. 45	22. 15	·1083					
23. 19	55. 30		***					
23. 39	55. 50	23. 25	·1079					
23. 44	57. 30	23. 39	·1085					
23. 59	55. 45	23. 50	·1082					
			(†)					
Mar.26		Mar.26		Mar.26		Mar.26		
0. 0	20. 55. 45		(†)		(†)	0. 0	53·2	54·0
0. 10	56. 35	0. 2	·1081	1. 0	·00964*	1. 0	54·0	54·8
0. 38	53. 55	0. 17	·1088	1. 37	·00900	2. 0	55·5	56·5
0. 49	54. 40	0. 42	·1084	3. 18	·00810	3. 0	57·0	58·2
0. 54	54. 20	1. 12	·1088	4. 31	·00660	9. 0	59·0	58·1
1. 43	53. 55	1. 34	·1104	6. 56	·00440	21. 0	48·0	48·0
2. 2	56. 50	2. 2	·1110	8. 30	·00380			
2. 16	57. 10	2. 14	·1105	11. 40	·00400			
2. 20	55. 0	2. 37	·1106	14. 2	·00350			
2. 40	53. 50	3. 23	·1111	17. 28	·00827			
3. 24	53. 50	3. 58	·1108	20. 45	·01000			
4. 10	49. 50	4. 16	·1113	21. 7	·00960			
4. 42	50. 0	4. 28	·1112	23. 59	·01080			
5. 32	47. 40	4. 59	·1117					
6. 28	47. 45	5. 30	·1116					
7. 9	44. 10	6. 16	·1123					
7. 30	46. 5	6. 53	·1113					
7. 37	47. 0	7. 13	·1118					
8. 18	47. 30		***					
8. 36	44. 55	8. 22	·1112					
9. 44	48. 0	8. 44	·1115					
10. 33	46. 55	9. 14	·1110					
11. 7	44. 0	9. 34	·1114					
11. 26	45. 20	9. 58	·1112					
11. 43	39. 20	10. 52	·1117					
11. 52	39. 35	11. 7	·1113					
12. 0	38. 10	11. 15	·1116					
12. 53	45. 0	11. 21	·1114					
13. 9	45. 30	11. 31	·1125					
13. 29	41. 55	12. 14	·1105					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar.26		Mar.26						
h m	° ′ ″	h m		h m		h m	°	°
14. 10	20. 44. 0	12. 36	·1101					
	***	12. 54	·1101					
14. 59	40. 55	13. 12	·1107					
	***	13. 41	·1103					
16. 11	43. 40	13. 56	·1107					
	***	14. 23	·1108					
17. 30	44. 0	14. 38	·1121					
18. 9	42. 55	14. 58	·1121					
18. 44	44. 5	15. 30	·1113					
19. 22	42. 55		***					
20. 10	42. 35	18. 0	·1112					
20. 23	43. 10	18. 26	·1115					
20. 36	42. 30	19. 18	·1108					
21. 37	45. 35	20. 39	·1100					
21. 48	45. 0	20. 48	·1101					
22. 9	47. 25	22. 0	·1091					
22. 25	47. 0	22. 14	·1094					
23. 54	51. 55	22. 35	·1091					
23. 59	52. 15	23. 12	·1092					
		23. 57	·1099					
		23. 59	·1102					
Mar.27		Mar.27		Mar.27		Mar.27		
0. 0	20. 52. 15	0. 0	·1102	0. 0	·01080	1. 0	51·0	51·3
1. 19	52. 5	0. 15	·1102	3. 30	·01130	3. 0	53·8	55·1
1. 35	52. 25	0. 34	·1105	5. 11	·00975	9. 0	55·9	55·9
1. 54	51. 30	0. 50	·1105	8. 14	·00833	21. 0	49·9	50·3
2. 16	52. 55	0. 56	·1112	11. 15	·00820			
2. 37	51. 45	1. 19	·1114	12. 38	·00870			
2. 52	52. 0	1. 30	·1116	15. 56	·01088			
3. 9	50. 30	2. 0	·1123	16. 18	·01080			
3. 32	50. 35	2. 46	·1118	19. 12	·01180			
3. 54	48. 40	3. 18	·1125	20. 33	·01085			
4. 33	48. 40	3. 47	·1116	21. 45	·01035			
5. 4	48. 0	4. 46	·1128	23. 0	·01076			
5. 40	48. 55	5. 23	·1128		(†)			
6. 48	45. 20	6. 42	·1108	23. 59	·01090			
7. 25	48. 0	6. 57	·1111					
7. 43	48. 5	7. 30	·1110					
8. 0	49. 25	7. 56	·1116					
8. 32	47. 20	8. 38	·1112					
9. 5	48. 55	8. 47	·1115					
9. 19	48. 0	8. 53	·1113					
9. 51	48. 5	9. 16	·1110					
10. 18	47. 0	9. 45	·1116					
10. 49	47. 40	10. 15	·1112					
11. 9	46. 55	10. 57	·1117					
11. 25	47. 10	11. 38	·1116					
11. 42	45. 30	11. 46	·1118					
11. 54	46. 35	12. 5	·1119					
12. 27	39. 55	12. 15	·1127					
12. 47	40. 45	13. 8	·1106					
13. 25	37. 40	13. 30	·1110					
14. 35	39. 0	14. 4	·1109					
14. 47	38. 30	14. 32	·1110					
15. 22	41. 30	14. 47	·1106					
15. 49	48. 50	15. 27	·1103					
16. 31	41. 20	15. 53	·1117					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Mar.27		Mar.27						
h m	° ′ ″	h m		h m		h m	°	°
16. 51	20. 39. 55	16. 13	·1114					
17. 7	41. 0	16. 27	·1117					
18. 14	41. 55	17. 4	·1113					
18. 31	41. 5	17. 23	·1112					
18. 43	42. 0	18. 2	·1114					
18. 52	41. 15	18. 20	·1112					
18. 58	41. 55	18. 39	·1113					
19. 58	39. 20	19. 29	·1105					
20. 27	41. 0	20. 13	·1103					
20. 36	40. 20	20. 59	·1100					
20. 54	41. 5	21. 26	·1103					
21. 47	46. 30	21. 45	·1097					
21. 56	48. 50	22. 0	·1098					
22. 3	48. 5	22. 45	·1098					
22. 31	51. 40	23. 1	·1095					
22. 58	53. 10	23. 25	·1100					
23. 21	55. 30	23. 59	·1100					
23. 59	56. 5							
Mar.28		Mar.28		Mar.28		Mar.28		
0. 0	20. 56. 5	0. 0	·1100	0. 0	·01090	1. 0	54 ·0	52 ·5
0. 30	56. 10	0. 16	·1099	2. 1	·01063	3. 0	56 ·6	54 ·2
0. 46	59. 0	0. 30	·1099	2. 25	·01088	9. 0	57 ·2	55 ·4
1. 8	59. 5	0. 51	·1106	3. 18	{·01100	21. 0	53 ·0	52 ·6
1. 53	55. 45	1. 13	·1106		{·01170			
2. 23	55. 45		(†)	3. 45:	·01168			
2. 37	54. 0	2. 25	·1109	4. 19	·01080			
3. 3	53. 30	2. 43	·1108	5. 40	·01000			
3. 20	54. 45	3. 33	·1126	6. 0:	·01020			
3. 33	53. 45	3. 43	·1125	6. 35	·00990			
3. 45	54. 30	3. 55	·1128	6. 41	·01000			
4. 3	51. 5	4. 12	·1116	8. 0	·00942			
4. 23	51. 55	4. 45	·1124	9. 13	{·00920			
4. 47	50. 25	5. 14	·1123		{·00980			
5. 18	50. 20	5. 27	·1126	12. 45	·00940			
5. 28	48. 35	5. 44	·1108	13. 15	·00955			
5. 38	42. 20	6. 9	·1133	17. 45	·00980			
5. 52	39. 25	6. 35	·1112	18. 23	·01020			
6. 17	43. 40	6. 45	·1126	21. 0	·01060			
6. 31	40. 20	7. 7	·1110	23. 59	·01085			
7. 17	48. 0	7. 26	·1110					
7. 58	47. 45	7. 37	·1115					
8. 10	46. 40	8. 3	·1118					
8. 25	47. 25	8. 17	·1127					
9. 0	47. 10	8. 34	·1118					
9. 24	46. 0	9. 17	·1117					
10. 9	47. 10	9. 24	·1120					
11. 24	46. 5		***					
11. 51	48. 35	10. 11	·1119					
12. 10	41. 35	10. 23	·1117					
12. 21	40. 50	10. 47	·1123					
12. 41	36. 0	11. 8	·1119					
13. 15	41. 35	11. 15	·1120					
13. 23	41. 10	11. 28	·1116					
13. 47	43. 35	11. 43	·1116					
14. 25	43. 10	11. 52	·1111					
14. 39	44. 35	12. 6	·1111					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Mar.28		Mar.28						
h m	° ′ ″	h m		h m		h m	°	°
15. 8	20. 43. 50	12. 17	·1118					
15. 16	40. 35	12. 32	·1109					
15. 32	39. 50	12. 48	·1106					
15. 39	41. 10	13. 13	·1109					
16. 4	40. 30	13. 21	·1107					
16. 11	41. 35	13. 43	·1109					
16. 30	40. 10	13. 51	·1112					
16. 53	43. 20	14. 23	·1111					
17. 7	43. 5	14. 44	·1112					
17. 38	39. 25	14. 53	·1114					
17. 57	40. 50	15. 4	·1113					
18. 25	45. 10	15. 18	·1115					
19. 0	41. 20	15. 40	·1113					
19. 7	41. 45	16. 9	·1119					
19. 53	41. 5	16. 26	·1111					
20. 28	43. 10	16. 59	·1111					
20. 38	42. 25	17. 16	·1117					
20. 47	43. 55	17. 50	·1099					
21. 10	46. 0	18. 22	·1110					
21. 40	46. 25	18. 58	·1110					
21. 48	48. 0	20. 15	·1101					
23. 39	54. 50	20. 25	·1097					
23. 53	54. 40	20. 35	·1099					
23. 59	55. 30	21. 2	·1092					
		21. 22	·1090					
		21. 44	·1088					
		22. 4	·1085					
		22. 58	·1084					
		23. 36	·1091					
		23. 45	·1088					
		23. 59	·1094					
Mar.29		Mar.29		Mar.29		Mar.29		
0. 0	20. 55. 30*	0. 0	·1094	0. 0	·01085	8. 30	55 ·8	54 ·5
0. 10	57. 25	0. 10	·1097	2. 49	·01155	21. 0	53 ·0	53 ·0
0. 20	56. 30	0. 20	·1093	5. 53	·01155			
0. 28	58. 10	0. 31	·1099	6. 27	·01175			
1. 19	57. 45	0. 43	·1095	8. 52	·01107			
1. 27	56. 0	0. 53	·1098	11. 23	·01080			
1. 39	56. 55	1. 16	·1099	14. 56	·01085			
2. 5	57. 25	1. 29	·1094	15. 27	·01050			
2. 31	53. 0	2. 9	·1108	19. 30	·01150			
2. 42	54. 20	2. 31	·1101	22. 30	·01147			
3. 0	53. 40	2. 41	·1104	23. 59	·01153			
3. 10	52. 5	2. 48	·1111					
3. 22	52. 0	3. 8	·1114					
3. 50	49. 40	3. 16	·1111					
4. 2	50. 0	3. 28	·1112					
5. 24	48. 30	3. 42	·1106					
5. 43	46. 25	3. 55	·1106					
6. 19	37. 25	4. 4	·1112					
6. 47	40. 0	4. 26	·1115					
6. 57	39. 35	4. 38	·1121					
7. 12	42. 50	5. 9	·1115					
8. 21	44. 5	5. 17	·1115					
9. 11	34. 0	5. 26	·1113					
10. 3	38. 50	5. 56	·1111					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Mar. 29 h m	° ′ ″
10. 18	20. 37. 35
10. 57	43. 50
11. 12	43. 20
12. 17	48. 0
13. 10	48. 0
13. 38	42. 45
14. 10	46. 55
14. 35	42. 50
14. 57	48. 35
15. 22	39. 30
15. 46	39. 5
16. 12	41. 15
17. 11	40. 25
17. 37	43. 15
17. 49	41. 0
17. 55	42. 20
18. 34	42. 10
18. 52	40. 50
	***
20. 23	42. 0
21. 26	44. 30
21. 47	47. 0
22. 21	48. 25
22. 46	51. 45
23. 17	53. 35
23. 23	56. 5
23. 51	54. 30
23. 59	54. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 29 h m	
6. 31	·1120
6. 57	·1106
7. 17	·1115
7. 31	·1108
7. 59	·1103
8. 7	·1104
8. 16	·1100
8. 30	·1098
8. 45	·1098
8. 59	·1097
9. 9	·1092
9. 36	·1094
9. 43	·1092
10. 1	·1094
10. 13	·1092
10. 42	·1099
10. 58	·1098
11. 26	·1103
11. 41	·1102
11. 53	·1104
12. 15	·1106
13. 8	·1106
13. 23	·1108
13. 34	·1105
14. 4	·1105
14. 24	·1109
14. 55	·1111
15. 15	·1118
15. 43	·1117
15. 54	·1114
16. 1	·1115
16. 9	·1113
16. 46	·1111
17. 46	·1116
18. 1	·1107
18. 13	·1111
18. 28	·1109
18. 32	·1107
18. 46	·1107
19. 0	·1104
19. 20	·1107
19. 50	·1104
20. 7	·1100
20. 27	·1096
20. 33	·1099
20. 41	·1096
20. 55	·1097
21. 20	·1092
21. 45	·1092
21. 59	·1096
22. 41	·1074
22. 53	·1079
22. 58	·1079
23. 22	·1093
23. 38	·1092
23. 52	·1093
23. 59	·1093

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
Mar. 30 h m	° ′ ″
0. 0	20. 54. 10
0. 7	54. 0
0. 57	57. 55
1. 26	57. 55
1. 35	56. 40
	(†)
2. 8	55. 10
2. 13	54. 15
2. 19	55. 0
2. 26	53. 30
2. 35	55. 5
	(†)
3. 0	57. 53*
4. 0	52. 0
4. 28	49. 0
5. 7	48. 40
6. 40	45. 35
8. 0	44. 0
8. 21	44. 10
9. 3	40. 15
9. 16	41. 40
9. 29	40. 50
9. 42	35. 55
9. 54	41. 30
10. 13	45. 25
10. 30	42. 5
10. 48	42. 40
11. 14	40. 30
11. 27	38. 45
11. 46	40. 20
12. 12	37. 20
12. 21	38. 50
12. 52	37. 30
13. 19	44. 55
13. 37	44. 0
13. 49	45. 55
14. 12	40. 30
14. 27	43. 20
14. 59	42. 0
15. 27	43. 0
15. 52	46. 0
16. 4	47. 55
16. 13	46. 30
16. 31	45. 40
16. 58	47. 0
17. 23	44. 25
17. 37	44. 35
17. 53	43. 5
18. 21	43. 50
18. 30	43. 0
18. 42	44. 40
18. 53	43. 15
19. 0	44. 0
19. 5	42. 20
19. 23	42. 5
19. 28	43. 5
19. 36	41. 50
	***

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Mar. 30 h m	
0. 0	·1095
0. 7	·1095
0. 22	·1107
0. 27	·1106
0. 55	·1111
	(†)
1. 0	·1115*
1. 18	·1112
1. 31	·1102
1. 46	·1119
1. 53	·1115
2. 0	·1118
2. 9	·1114
2. 16	·1121
2. 26	·1114
2. 32	·1121
2. 45	·1122
2. 52	·1115
3. 6	·1126
3. 17	·1112
3. 47	·1102
3. 55	·1105
4. 12	·1079
4. 41	·1095
5. 11	·1099
5. 30	·1098
5. 54	·1104
6. 18	·1102
6. 30	·1107
6. 46	·1106
7. 10	·1108
7. 21	·1107
7. 50	·1108
8. 3	·1106
8. 22	·1107
8. 45	·1105
9. 0	·1101
9. 17	·1104
9. 36	·1103
9. 48	·1122
10. 6	·1119
10. 17	·1106
10. 33	·1113
10. 50	·1112
11. 22	·1103
11. 38	·1108
11. 54	·1108
12. 9	·1102
12. 37	·1109
12. 57	·1104
13. 15	·1094
13. 49	·1117
14. 18	·1116
14. 32	·1118
14. 54	·1104
15. 12	·1108
15. 31	·1098
15. 44	·1093
16. 40	·1117

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Mar. 30 h m	
0. 0	·01153
1. 27	·01150
2. 23	·01190
3. 0	·01173
3. 10	·01195
3. 57	·01180
4. 16	·01144
4. 40	·01137
5. 30	·01086
6. 27	·01070
9. 55	·01127
10. 21	·01120
12. 30	·01140
13. 48	·01147
14. 55	·01130
16. 10	·01170
19. 15	·01190 / ·01120
21. 8	·01140
21. 25	·01100
22. 29	·01083
23. 40	·01120
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar. 30 h m	°	°
1. 0	55·0	54·0
3. 0	56·1	55·3
9. 0	54·8	53·0
21. 0	48·0	48·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.30		Mar.30						
h m	° ′ ″	h m		h m		h m	°	°
20. 37	20. 43. 0	17. 22	·1117					
20. 45	44. 15	17. 34	·1118					
21. 28	41. 5	17. 48	·1116					
21. 39	47. 5	18. 7	·1117					
22. 27	49. 55	18. 31	·1111					
22. 38	49. 40	18. 43	·1114					
23. 59	54. 0	18. 56	·1108					
		19. 1	·1109					
		19. 10	·1104					
		19. 24	·1106					
		19. 38	·1101					
		20. 37	·1099					
		20. 47	·1101					
		21. 30:	·1095					
		21. 49	·1103					
		22. 12	·1104					
		22. 27	·1102					
		22. 34	·1098					
		22. 45	·1101					
		23. 22	·1097					
		23. 59	·1097					
Mar.31		Mar.31		Mar.31		Mar.31		
0. 0	20. 54. 0	0. 0	·1097		(†)	1. 0	51·6	50·6
0. 16	54. 55	0. 13	·1097	0. 14	·01140	3. 0	55·5	56·0
0. 28	53. 55	0. 17	·1100	1. 26	·01160	9. 0	53·1	54·0
0. 37	56. 50	0. 24	·1108	2. 41:	·01170	21. 0	43·0	44·0
0. 44	55. 20		***	4. 10	·01065	22. 0	43·8	44·0
0. 54	56. 5	1. 2	·1107	5. 0	·01050	23. 0	45·0	46·0
1. 3	55. 0	1. 9	·1113	5. 48	{·00988 ·01037			
1. 32	52. 25	1. 27	·1114					
1. 38	54. 0	1. 41	·1122	7. 27:	·00920			
1. 51	52. 25	2. 8	·1127	8. 55	{·00895 ·00927			
2. 2	54. 0	2. 16	·1119					
2. 12	52. 0	2. 42	·1128	10. 48	·00913			
2. 26	52. 35		***	12. 43	·00980			
3. 10	52. 10	3. 15	·1126	16. 5	·01140			
3. 21	51. 25	3. 31	·1118	19. 35	·01206			
4. 45	47. 5	3. 45	·1118	20. 30	·01210			
5. 0	48. 5	4. 0	·1126	22. 10	·01207			
5. 10	46. 55	4. 20	·1121	23. 43	·01260			
6. 1	44. 40	4. 39	·1126	23. 59	·01253			
6. 28	45. 0	4. 50	·1123					
6. 46	43. 25	5. 7	·1127					
6. 59	43. 55	5. 17	·1118					
7. 11	43. 0	5. 48	·1124					
8. 16	44. 0	5. 53	·1127					
8. 37	42. 55	6. 12	·1127					
8. 58	43. 55	6. 52:	·1119					
9. 25	43. 10	7. 30	·1128					
9. 40	44. 40	7. 55	·1121					
10. 5	44. 0	8. 15	·1124					
10. 26	45. 30	8. 30	·1119					
	***	9. 17	·1123					
11. 13	44. 5	9. 28	·1121					
	***	9. 38	·1125					
12. 13	45. 0	10. 1	·1125					
	***	10. 8	·1127					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.31		Mar.31						
h m	° ′ ″	h m		h m		h m	°	°
13. 13	20. 44. 45	11. 22	·1130					
14. 30	46. 0	11. 54	·1126					
15. 38	45. 10	12. 4	·1127					
15. 52	44. 0	12. 53	·1125					
	***	13. 2	·1122					
16. 49	45. 40	13. 11	·1124					
17. 10	43. 15	13. 51	·1120					
17. 24	44. 55	13. 59	·1122					
17. 37	43. 5	14. 38	·1120					
17. 54	44. 10	15. 40	·1126					
18. 15	42. 0	15. 55	·1124					
18. 37	42. 25	16. 7	·1126					
18. 44	40. 35	16. 46	·1126					
19. 8	40. 50	17. 4	·1133					
19. 30	43. 20	17. 18	·1131					
19. 39	41. 45	17. 27	·1135					
19. 50	42. 55	17. 39	·1132					
20. 7	41. 25	17. 52	·1134					
20. 25	43. 40	18. 14	·1128					
20. 45	42. 45	18. 20	·1130					
21. 50	44. 40	18. 39	·1131					
21. 57	42. 45	18. 50	·1127					
22. 18	47. 40	19. 0	·1128					
22. 37	47. 10	19. 13	·1123					
23. 5	49. 5	19. 30	·1125					
23. 17	50. 55	19. 45	·1118					
23. 27	50. 5	20. 1	·1116					
23. 50	55. 0	20. 16	·1118					
23. 59	54. 5	20. 43	·1111					
		21. 22	·1111					
		21. 56	·1104					
		22. 7	·1113					
		22. 36	·1103					
		22. 44	·1109					
		22. 52	·1108					
		23. 12	·1121					
		23. 27	·1116					
		23. 37	·1123					
		23. 40	·1121					
		23. 49	·1130					
		23. 59	·1119					
Apr. 1		Apr. 1		Apr. 1		Apr. 1		
0. 0	20. 54. 5	0. 0	·1119	0. 0	·01253	0. 0	48·0	47·0
0. 15	53. 5	0. 15	·1108	2. 0	·01227	1. 0	49·5	48·5
0. 24	55. 0	0. 27	·1113	2. 42	·01240	2. 0	52·0	51·0
0. 39	53. 50	0. 38	·1109	3. 4	{·01217 ·01270	3. 0	53·6	52·8
0. 51	55. 0	0. 51	·1121			6. 0	56·2	53·4
0. 59	54. 10	0. 57	·1119	4. 0	·01090	9. 0	55·0	52·0
1. 29	53. 15	1. 22	·1128	7. 0	·00873	12. 0	52·0	50·0
1. 39	53. 50	1. 27	·1125	9. 0	·00820	21. 0	44·0	44·8
1. 56	53. 0	1. 39	·1130	11. 18	·00787	22. 0	44·8	45·0
2. 15	55. 10	1. 52	·1127	11. 55	·00810	23. 0	46·3	46·5
2. 25	53. 5	2. 13	·1130	12. 33	·00770			
2. 34	54. 45	2. 22	·1132	13. 45	·00820			
3. 10	52. 10	2. 34	·1130	15. 9	·00940			
3. 23	53. 45		***	18. 5	{·01110 ·01138			
3. 38	53. 40	3. 4	·1148					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 1		Apr. 1		Apr. 1				
h m	° ′ ″	h m		h m		h m	°	°
3. 49	20. 50. 20	3. 40	·1152	19. 55	·01225			
3. 54	51. 35	3. 50	·1128	21. 7	·01232			
4. 9	50. 20	4. 12	·1141		·01167			
4. 19	47. 50	4. 16	·1135	23. 36	·01320			
4. 44	43. 50	4. 22	·1147	23. 59	·01310			
5. 12	45. 5	4. 36	·1146					
5. 26	47. 25	4. 45	·1140					
5. 31	46. 5	4. 59	·1143					
6. 45	46. 50	5. 15	·1145					
7. 3	46. 30	5. 25	·1149					
7. 9	48. 0	5. 32	·1149					
7. 15	46. 25	5. 47	·1140					
7. 45	44. 35	5. 53	·1144					
8. 7	38. 25	6. 23	·1128					
8. 22	35. 25	6. 47	·1129					
9. 3	39. 0	7. 0	·1127					
9. 16	39. 15	7. 14	·1134					
9. 53	42. 0	7. 30	·1129					
9. 59	44. 25	7. 52	·1124					
10. 14	43. 30	8. 19	·1134					
10. 25	44. 0	8. 43	·1131					
10. 39	40. 15	8. 47	·1133					
11. 9	42. 25	9. 0	·1122					
11. 26	40. 0	9. 13	·1136					
11. 40	43. 5	9. 26	·1137					
11. 50	41. 55	9. 34	·1131					
12. 17	53. 0	9. 40	·1133					
12. 31	49. 50	10. 7	·1124					
	***	10. 28	·1120					
12. 57	50. 25	10. 47	·1127					
	***	10. 55	·1124					
13. 53	42. 10	11. 1	·1125					
14. 35	41. 5	11. 28	·1116					
15. 24	43. 0	11. 55	·1152					
15. 43	42. 25	12. 4	·1136					
16. 16	43. 35	12. 15	·1141					
16. 41	44. 0	12. 43	·1124					
	***	13. 0	·1125					
18. 8	41. 55	13. 8	·1121					
18. 48	43. 15	13. 12	·1122					
19. 0	41. 30	13. 17	·1120					
19. 19	41. 35	13. 43	·1127					
19. 53	47. 25	13. 52	·1122					
	***	14. 6	·1125					
20. 38	44. 40	14. 18	·1121					
20. 45	46. 0	14. 39	·1119					
20. 57	43. 25	14. 47	·1117					
21. 23	44. 10		***					
	***	15. 20	·1125					
21. 53	47. 40	16. 11	·1124					
22. 0	46. 0	16. 16	·1127					
22. 30	49. 25	16. 25	·1123					
	***	16. 43	·1125					
23. 31	51. 40	17. 1	·1123					
23. 40	54. 40		***					
23. 48	53. 35	17. 53	·1126					
23. 59	53. 40	18. 24	·1130					
		18. 48	·1128					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Apr. 1						
h m	° ′ ″	h m		h m		h m	°	°
		18. 58	·1122					
		19. 8	·1124					
		19. 19	·1121					
		19. 45	·1118					
		20. 3	·1113					
		20. 20	·1114					
		20. 29	·1111					
		20. 43	·1113					
		20. 52	·1108					
		21. 8	·1114					
		21. 23	·1114					
			***					
		22. 7	·1105					
		22. 26	·1106					
		22. 37	·1102					
		22. 54	·1105					
		23. 1	·1101					
		23. 25	·1111					
		23. 35	·1122					
			***					
		23. 56	·1106					
		23. 59	·1106					
Apr. 2		Apr. 2		Apr. 2		Apr. 2		
0. 0	20. 53. 40	0. 0	·1106	0. 0	·01310	0. 0	49 ·2	49 ·0
0. 20	53. 50	0. 13	·1108	1. 22	·01270	1. 0	51 ·0	51 ·0
0. 36	52. 30	0. 25	·1106	1. 57	·01290	2. 0	53 ·3	53 ·7
0. 42	53. 0	0. 30	·1107	3. 17	·01110	3. 0	55 ·0	55 ·5
0. 58	51. 55	0. 43	·1111	4. 54	·00940	9. 0	58 ·7	59 ·0
1. 8	53. 55	0. 59	·1111	8. 37	·00740	22. 0	46 ·0	47 ·0
2. 8	49. 45	1. 8	·1117		·00750			
2. 49	49. 15	1. 22	·1116	10. 20	·00730			
3. 11	47. 40	1. 25	·1120	11. 40	·00740			
3. 20	48. 25	1. 30	·1116	13. 53	·01120			
3. 36	47. 0	1. 36	·1120	16. 30	·01010			
4. 12	46. 0	2. 32	·1129	18. 45	·01200			
4. 39	46. 10	2. 49	·1137		(†)			
4. 53	44. 10	3. 6	·1140	22. 0	·01264			
5. 19	42. 25		(†)	22. 3	·01263			
5. 36	42. 55	3. 40	·1138	23. 59	·01340			
5. 53	41. 25	4. 0	·1143					
6. 22	41. 55	4. 15	·1140					
6. 33	43. 25	4. 22	·1143					
7. 53	45. 0	4. 28	·1142					
7. 58	45. 45	4. 44	·1146					
8. 13	44. 15	4. 56	·1136					
9. 18	45. 30	5. 13	·1144					
9. 29	44. 40	5. 47	·1136					
9. 36	45. 0	6. 13	·1150					
11. 1	43. 55	6. 26	·1149					
12. 22	44. 55	6. 34	·1151					
13. 39	44. 30	6. 57	·1148					
	***	7. 17	·1142					
15. 47	46. 15	7. 46	·1131					
16. 9	44. 30	8. 3	·1134					
	***	8. 16	·1130					
17. 27	44. 40	8. 25	·1132					
	***	8. 53	·1131					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 2		Apr. 2						
h m	° ′ ″	h m		h m		h m	°	°
18. 28	20. 42. 40	9. 13	·1136					
	***	9. 38	·1129					
18. 55	40. 0	9. 58	·1132					
19. 13	43. 5	10. 8	·1130					
19. 23	42. 5	10. 45	·1130					
19. 31	43. 0	13. 59	·1122					
19. 47	40. 40	15. 8	·1122					
19. 55	41. 45		(†)					
20. 18	39. 50	20. 26	·1125					
20. 33	41. 25	21. 0	·1121					
21. 18	41. 55	21. 26	·1121					
21. 58	45. 40	21. 32	·1112					
22. 16	47. 40	22. 12	·1098					
22. 38	48. 25	22. 25	·1098					
22. 58	51. 15	22. 43	·1101					
23. 59	53. 25	23. 0	·1112					
		23. 47	·1114					
		23. 59	·1120					
Apr. 3		Apr. 3		Apr. 3		Apr. 3		
0. 0	20. 53. 25	0. 0	·1120	0. 0	·01340	8. 0	52 ·0	52 ·1
0. 16	56. 15	0. 8	·1123	2. 0	·01380	21. 0	49 ·0	49 ·0
0. 42	56. 35	0. 17	·1123	2. 30	·01383			
1. 0	55. 35	0. 27	·1117	5. 11	·01320			
1. 16	52. 5	0. 45	·1116	6. 44:	·01175			
1. 36	53. 0	1. 5	·1106	8. 55	·01088			
1. 58	52. 30	1. 9	·1111	12. 30	·01045			
2. 23	50. 40	1. 14	·1108	16. 17	·01090			
2. 45	50. 50	2. 30	·1120	20. 30	·01260			
2. 58	49. 5	2. 53	·1129	23. 59	·01297			
5. 11	45. 25	3. 6	·1127					
7. 39	45. 20	3. 43	·1130					
8. 26	44. 50	3. 56	·1129					
9. 22	44. 40		***					
9. 52	45. 15	5. 31	·1126					
10. 17	43. 0	6. 14	·1126					
10. 51	44. 20	6. 28	·1128					
11. 13	45. 50	7. 30	·1128					
11. 35	45. 5	7. 39	·1130					
12. 58	45. 45	7. 47	·1128					
13. 35	46. 20	8. 13	·1127					
13. 42	47. 45	8. 34	·1130					
14. 0	47. 45	8. 55	·1127					
14. 12	46. 40	9. 32	·1125					
14. 23	47. 55	9. 41	·1129					
15. 45	45. 5	9. 49	·1127					
17. 35	45. 5	10. 12	·1128					
17. 54	44. 0	10. 26	·1125					
18. 25	44. 50	10. 34	·1127					
18. 39	43. 25	10. 56	·1125					
19. 10	44. 10	11. 23	·1127					
19. 37	42. 45	11. 37	·1125					
20. 12	42. 0	11. 43	·1126					
21. 26	44. 0	11. 50	·1124					
23. 41	50. 10	11. 57	·1128					
23. 54	50. 0	12. 4	·1125					
23. 59	50. 10	12. 17	·1125					
		12. 44	·1123					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 4		Apr. 4		Apr. 4		Apr. 4		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 50. 10	0. 0	·1119	0. 0	·01297	1. 0	52 ·7	51 ·7
0. 42	51. 15	0. 30	·1121	1. 8	·01300	3. 0	55 ·3	53 ·4
1. 32	49. 45	0. 39	·1124		·01210	9. 0	55 ·8	53 ·5
1. 53	50. 20	1. 0	·1120	3. 53	·01163	22. 35	47 ·2	47 ·8
2. 22	49. 0	1. 21	·1118	5. 6	·01078			
2. 57	49. 5	1. 56	·1121	7. 42	·00955			
3. 14	48. 0	2. 9	·1116	9. 27	·00920			
5. 29	45. 35	2. 38	·1116	10. 25	·00883			
6. 26	45. 30	3. 0	·1124	12. 38	·00940			
6. 41	46. 30	3. 15	·1117	14. 6	·01000			
7. 23	46. 0	3. 40	·1115	17. 25	·01200			
7. 38	42. 55	3. 52	·1117	17. 53	·01210			
7. 59	44. 10	5. 0	·1117	18. 34	·01250			
8. 24	42. 25	5. 20	·1123	20. 15	·01290			
9. 0	44. 50	5. 44	·1120	23. 8	·01295			
9. 21	44. 15	7. 5	·1120	23. 20	·01307			
9. 32	44. 55	7. 22	·1123		·01210			
9. 51	43. 25	7. 46	·1119	23. 59	·01226			
10. 4	44. 0	8. 7	·1122					
10. 24	43. 0	8. 20	·1120					
10. 49	39. 55	8. 34	·1123					
11. 25	41. 5	8. 48	·1124					
11. 43	43. 20	8. 59	·1122					
12. 32	41. 55	9. 8	·1123					
12. 47	44. 25	9. 30	·1133					
13. 28	48. 55	9. 53	·1124					
14. 49	43. 50	10. 8	·1127					
	(†)	10. 38	·1120					
15. 59	43. 0	10. 49	·1121					
16. 54	44. 50	11. 3	·1126					
17. 22	50. 15	11. 32	·1125					
18. 20	46. 0	11. 48	·1127					
18. 50	46. 0	12. 17	·1121					
19. 25	43. 35	12. 28	·1121					
20. 21	41. 30	12. 40	·1118					
21. 4	41. 5	13. 42	·1130					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 4		Apr. 4	
h m	° ′ ″	h m	
21. 18	20. 41. 0	14. 36	·1125
21. 28	42. 20	15. 1	·1126
22. 6	42. 55	15. 42	·1130
23. 59	51. 0	16. 17	·1126
		17. 1	·1124
		17. 37	·1137
		18. 13	·1130
		18. 44	·1136
		20. 15	·1126
		22. 0	·1113
		22. 15	·1112
		22. 36	·1108
		22. 53	·1111
		23. 2	·1109
		23. 15	·1108
		23. 59	·1113
Apr. 5		Apr. 5	
0. 0	20. 51. 0	0. 0	·1113
0. 30	52. 55	0. 2	·1113
2. 5	51. 20	0. 46	·1114
4. 3	47. 20	1. 4	·1111
5. 41	45. 25	2. 20	·1123
6. 6	44. 25		
6. 31	45. 20	3. 5	·1124
6. 50	44. 35	3. 15	·1127
7. 2	45. 0	3. 23	·1126
7. 53	43. 40		
8. 58	45. 55	4. 38	·1126
9. 13	44. 10	5. 10	·1129
9. 23	45. 30	5. 24	·1127
9. 49	44. 5	6. 28	·1121
10. 16	43. 55	6. 48	·1126
10. 25	44. 30	7. 15	·1128
11. 2	45. 0	7. 25	·1126
11. 10	46. 5	8. 8	·1122
11. 23	45. 0	8. 15	·1123
11. 40	47. 30	8. 39	·1121
11. 57	45. 35	8. 59	·1123
13. 47	45. 30	9. 11	·1121
13. 56	46. 20	9. 30	·1124
15. 37	46. 5	9. 38	·1122
15. 51	47. 0	9. 57	·1123
16. 22	46. 0	10. 13	·1118
16. 36	46. 55	10. 30	·1122
17. 6	45. 45	10. 59	·1121
17. 41	45. 35	11. 7	·1125
17. 54	44. 55	11. 28	·1126
18. 16	45. 15	11. 45	·1131
18. 30	43. 5	12. 0	·1127
18. 49	43. 35	12. 35	·1124
19. 0	42. 30	12. 45	·1125
19. 26	44. 55	14. 0	·1123
19. 42	43. 15	14. 17	·1125
20. 0	40. 45	14. 47	·1124
20. 17	44. 20	15. 49	·1126
20. 41	47. 0	16. 19	·1129
21. 3	47. 40	16. 32	·1127

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		h m	°	°
Apr. 5		Apr. 5		
0. 0	·01226	8. 0	52 ·5	53 ·0
3. 30	·01220	21. 0	50 ·6	50 ·8
6. 54	·01115			
9. 52	·01040			
11. 48	·01040			
19. 36	·01160			
21. 3	·01160			
	·01096			
23. 59	·01080			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 5		Apr. 5	
h m	° ′ ″	h m	
21. 36	20. 44. 15	16. 49	·1130
21. 41	45. 20	17. 0	·1130
21. 57	44. 40	17. 42	·1126
22. 40	45. 35	17. 48	·1128
22. 58	47. 40	17. 54	·1127
23. 34	49. 10	18. 15	·1129
23. 59	52. 0	18. 33	·1128
		18. 52	·1129
		19. 11	·1127
		20. 6	·1114
		20. 21	·1114
		20. 53	·1108
		21. 20	·1112
		21. 50	·1113
		22. 29	·1107
		22. 40	·1108
		22. 54	·1109
		23. 19	·1106
		23. 53	·1111
		23. 59	·1110
Apr. 6		Apr. 6	
0. 0	20. 52. 0	0. 0	·1110
0. 30	51. 15	0. 28	·1102
0. 51	53. 5	0. 57	·1106
1. 38	53. 55	1. 30	·1103
2. 40	50. 40	1. 58	·1105
2. 55	51. 0	2. 43	·1110
4. 58	49. 0	2. 59	·1118
5. 36	47. 5	3. 15	·1118
5. 43	47. 40	3. 23	·1122
6. 2	44. 45	4. 8	·1130
6. 13	44. 0	4. 23	·1129
7. 47	45. 55	4. 38	·1125
7. 59	45. 0	4. 58	·1125
8. 9	46. 20	5. 13	·1127
8. 28	46. 30	5. 30	·1124
9. 38	44. 15	5. 49	·1127
10. 0	44. 5	6. 1	·1121
10. 16	45. 45	6. 37	·1117
10. 36	42. 30	6. 47	·1120
11. 40	45. 5	7. 28	·1120
13. 16	45. 30	7. 40	·1117
14. 2	45. 0	7. 45	·1119
15. 50	46. 10	7. 55	·1117
16. 0	45. 35	8. 40	·1121
17. 30	45. 25	9. 4	·1122
17. 48	44. 20	9. 23	·1125
18. 11	46. 30	9. 46	·1121
19. 48	41. 40	10. 3	·1122
20. 54	41. 15	10. 12	·1120
22. 53	48. 0	10. 17	·1132
22. 59	47. 45	10. 39	·1124
23. 16	48. 50	11. 0	·1129
23. 39	52. 0	12. 17	·1129
23. 52	52. 10	12. 35	·1133
23. 59	53. 25	13. 1	·1132
		15. 42	·1133

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m		h m	°	°
Apr. 6		Apr. 6		
0. 0	·01080	1. 0	54 ·0	53 ·4
1. 52	·01000	3. 0	56 ·1	54 ·4
2. 39	·00980	9. 0	56 ·9	54 ·6
	·00987	21. 0	51 ·0	50 ·0
4. 15	·00907			
8. 59	·00852			
9. 14	·00872			
13. 30	·00905			
16. 48	·01030			
22. 0	·01164			
23. 0	·01140			
23. 59	·01147			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Apr. 6 h m		h m		h m	°	°
		16. 0	·1135					
		16. 26	·1134					
		17. 1	·1135					
		17. 26	·1136					
		17. 45	·1135					
		18. 22	·1134					
		19. 4	·1134					
		20. 17	·1125					
		21. 0	·1120					
		21. 16	·1115					
		21. 40	·1114					
		22. 12	·1109					
		22. 46	·1107					
		23. 11	·1104					
		23. 59	·1111					
Apr. 7		Apr. 7		Apr. 7		Apr. 7		
0. 0	20. 53. 25	0. 0	·1111	0. 0	·01147	1. 0	54 ·0	52 ·0
0. 11	53. 30	0. 7	·1111	1. 25	·01140	3. 0	56 ·6	54 ·0
0. 34	54. 0	0. 15	·1110	3. 4	·01103	9. 0	55 ·9	52 ·8
1. 2	53. 50	0. 28	·1107	4. 54	·00930	21. 0	46 ·6	46 ·5
1. 13	52. 25	0. 39	·1110	7. 52:	·00850	22. 0	46 ·8	47 ·8
1. 39	53. 10	1. 12	·1105	11. 54	·00935	23. 0	49 ·0	48 ·0
2. 11	52. 5	1. 28	·1110	15. 49	·01090			
2. 15	51. 15	1. 52	·1121	19. 26	·01280			
2. 23	51. 40	2. 23	·1116	22. 0	·01300			
2. 39	50. 10	2. 42	·1114	22. 48	·01400			
3. 55	50. 35	3. 23	·1126		(†)			
4. 19	49. 50	3. 48	·1126					
4. 31	51. 0	3. 59	·1128					
5. 3	49. 15	4. 22	·1122					
6. 36	47. 25	4. 38	·1127					
6. 56	47. 30	5. 2	·1120					
7. 13	45. 0	5. 43	·1121					
7. 39	45. 45	6. 38	·1127					
8. 17	44. 50	7. 8	·1122					
9. 7	46. 30	7. 23	·1129					
10. 0	43. 0	7. 35	·1129					
10. 12	43. 35	7. 44	·1126					
10. 28	42. 5	8. 8	·1129					
11. 38	45. 0	8. 34	·1127					
12. 56	44. 40	9. 9	·1133					
14. 19	46. 55	9. 35	·1129					
	(†)	10. 11	·1128					
14. 46	46. 50	10. 20	·1124					
15. 15	44. 35	10. 40	·1125					
15. 35	45. 50	11. 8	·1129					
15. 50	44. 25	11. 44	·1127					
17. 13	48. 55	12. 38	·1128					
	***	12. 58	·1125					
19. 15	44. 0	13. 8	·1128					
19. 23	44. 25	13. 26	·1128					
19. 28	42. 45	13. 38	·1126					
19. 35	44. 0	13. 44	·1129					
20. 7	43. 0	13. 55	·1126					
20. 16	41. 20	14. 18	·1129					
20. 28	42. 0	14. 52	·1131					
20. 35	39. 10	15. 8	·1136					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 7 h m	° ′ ″	Apr. 7 h m		h m		h m	°	°
20. 46	20. 43. 0	15. 32	·1134					
20. 57	41. 5	15. 49	·1135					
22. 10	47. 55	16. 11:	·1138					
22. 20	46. 50	16. 33	·1132					
22. 33	48. 0	16. 49	·1131					
22. 46	47. 40	17. 30	·1134					
23. 0	49. 40	17. 43	·1138					
23. 26	48. 0	18. 31	·1133					
23. 59	50. 35	19. 22	·1134					
		19. 29	·1131					
		19. 37	·1134					
		19. 49	·1132					
		19. 50	·1129					
		20. 29	·1127					
		20. 33	·1124					
		20. 41	·1130					
		20. 52	·1122					
		21. 23	·1126					
		21. 50	·1117					
		22. 13	·1112					
		22. 17	·1108					
		22. 29	·1110					
		22. 52	·1108					
		23. 5	·1113					
		23. 31	·1101					
		23. 59	·1108					
Apr. 8		Apr. 8		Apr. 8		Apr. 8		
0. 0	20. 50. 35	0. 0	·1108		(†)	0. 0	50 ·8	49 ·1
0. 16	51. 50	0. 7	·1109	0. 22	·01133	1. 0	51 ·7	50 ·2
0. 31	50. 30	0. 30	·1100	5. 0	·01050	3. 0	53 ·5	51 ·6
0. 45	52. 25	1. 13	·1111	5. 51	·01070	6. 0	54 ·4	52 ·5
0. 52	51. 55	1. 34	·1114	9. 19	·00980	9. 0	54 ·1	52 ·8
1. 52	53. 30	1. 54	·1116	9. 34	·00960	12. 0	54 ·0	53 ·0
	***	2. 9	·1109	9. 55	·00960	18. 0	53 ·6	53 ·0
2. 32	52. 0	2. 57	·1117	10. 19	·00908	21. 0	52 ·8	53 ·0
2. 52	52. 25	3. 9	·1115	10. 48	·00930	22. 0	53 ·8	53 ·3
3. 8	51. 20	3. 27	·1119	11. 5	·00920	23. 0	53 ·7	54 ·0
3. 32	52. 25	3. 41	·1125	11. 34	·00930			
3. 52	51. 0	3. 55	·1117	11. 55	·00903			
4. 16	52. 25	4. 11	·1115	14. 56	·00920			
4. 32	51. 0	4. 20	·1120	16. 40	·00868			
4. 38	51. 50	4. 36	·1112	17. 24	·00896			
4. 56	51. 30	4. 59	·1127	18. 55	·00887			
5. 10	49. 20	5. 11	·1123	19. 19	·00900			
5. 17	49. 40	5. 23	·1130	19. 48	·00810			
5. 35	45. 15	5. 30	·1129	22. 11	·00800			
5. 49	40. 25	5. 58	·1136	23. 48	·00810			
6. 7	43. 50	6. 47	·1109	23. 59	·00860			
6. 19	43. 0	7. 6	·1121					
6. 30	44. 15	7. 47	·1114					
6. 41	46. 10	7. 53	·1109					
6. 52	44. 50	8. 6	·1116					
7. 6	46. 35	8. 18	·1117					
7. 32	47. 40	8. 25	·1124					
7. 40	45. 50	8. 40	·1121					
7. 58	45. 0	9. 0	·1120					

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 8		Apr. 8						
h m	° ′ ″	h m		h m		h m	°	°
8. 30	20. 47. 0	9. 11	·1123					
8. 56	44. 25	9. 27	·1123					
9. 9	41. 15	9. 36	·1128					
9. 23	42. 25	9. 50	·1124					
9. 36	34. 5	9. 55	·1128					
9. 58	50. 55	10. 15	·1108					
10. 6	47. 20	10. 42	·1123					
10. 34	40. 0	11. 7	·1111					
10. 44	41. 0	11. 32	·1123					
10. 58	43. 20	12. 0	·1108					
11. 15	39. 25	12. 49	·1116					
11. 28	38. 10	13. 10	·1113					
11. 40	39. 55	13. 49	·1113					
11. 59	39. 30	14. 3	·1117					
12. 30	40. 25	14. 15	·1117					
13. 3	38. 25	14. 23	·1122					
13. 32	41. 5	14. 38	·1121					
14. 4	41. 5	14. 50	·1124					
14. 23	42. 0	15. 21	·1118					
14. 43	40. 0	15. 32	·1129					
	***	15. 44	·1131					
15. 47	51. 5	15. 55	·1141					
15. 58	49. 30	16. 14	·1145					
16. 19	48. 0	16. 33	·1135					
16. 33	45. 35	16. 47	·1134					
16. 41	47. 0	16. 52	·1137					
17. 8	46. 15	17. 23	·1133					
17. 30	50. 5	18. 2	·1100					
17. 34	50. 0	18. 20	·1125					
	***	18. 28	·1125					
18. 20	59. 0	18. 41	·1136					
18. 28	57. 5	19. 11	·1130					
18. 40	57. 50	19. 28	·1130					
18. 49	56. 5	19. 42	·1135					
19. 6	49. 25	19. 59	·1133					
19. 16	47. 55	20. 0	·1122					
19. 23	48. 0	20. 5	·1133					
19. 30	46. 15	20. 9	·1113					
19. 43	48. 40	20. 22	·1134					
19. 53	48. 0	20. 56	·1103					
19. 57	48. 40	21. 9	·1104					
20. 0	43. 30	21. 42	·1048					
20. 4	46. 25	22. 4	·1075					
20. 28	46. 35	22. 15	·1072					
	***	22. 20	·1058					
21. 22	46. 5	22. 30	·1073					
21. 27	45. 0	22. 41	·1078					
21. 52	48. 0	22. 47	·1070					
22. 10	56. 35	23. 0	·1072					
22. 43	57. 40	23. 4	·1092					
22. 51	55. 0	23. 27	·1058					
23. 3	54. 50	23. 40	·1074					
23. 15	51. 25	23. 47	·1068					
23. 32	49. 45	23. 59	·1070					
23. 47	57. 20							
23. 59	57. 15							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 9		Apr. 9		Apr. 9		Apr. 9		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 57. 15	0. 0	·1070	0. 0	·00860	0. 0	55·7	54·7
0. 9	20. 58. 25	0. 5	·1064	0. 36	·00860	1. 0	56·1	55·5
0. 17	21. 2. 30	0. 11	·1081	3. 8	·00927	2. 0	57·0	56·1
0. 25	20. 59. 35	0. 13	·1078	3. 48	·00883	3. 0	58·0	56·6
0. 30	21. 1. 45	0. 18	·1068	7. 48	·00813	9. 0	59·0	56·8
0. 40	20. 59. 40	0. 30	·1076	9. 39	·00835	21. 0	55·8	55·0
0. 45	56. 25	0. 43	·1064	10. 0	·00815			
0. 57	56. 5	0. 54	·1066	10. 50	·00837			
1. 4	54. 30	0. 59	·1064	12. 17	·00750			
1. 21	59. 0	1. 12	·1086	12. 40:	·00760			
1. 25	20. 58. 20	1. 24	·1078	13. 7	·00700			
1. 34	21. 1. 50	1. 43	·1095	13. 24:	·00693			
1. 40	20. 59. 5	2. 0	·1064	13. 40	·00700			
1. 44	21. 1. 20	2. 4	·1066	13. 55:	·00700			
1. 57	20. 59. 55	2. 14	·1056	14. 12	·00740			
2. 0	21. 2. 5	2. 28	·1075	14. 41:	·00705			
2. 9	3. 0	2. 47	·1078	15. 8	·00770			
2. 27	21. 0. 0	3. 19	·1093	16. 10	·00802			
2. 37	20. 56. 20	3. 23	·1104	16. 56:	·00772			
2. 53	56. 0	3. 42	·1105	17. 40	·00810			
3. 11	56. 30	3. 49	·1100	18. 38	·00833			
3. 18	58. 0	4. 11	·1096	20. 49	·00880			
3. 26	57. 5	4. 41	·1105	23. 47	·00890			
3. 38	57. 50	5. 5	·1103		(†)			
5. 0	50. 0	5. 25	·1106					
5. 17	50. 5	5. 36	·1103					
5. 26	49. 25	5. 39	·1109					
5. 33	49. 40	5. 41	·1105					
5. 41	46. 35	5. 45	·1109					
5. 45	47. 15	5. 49	·1097					
6. 1	47. 40	5. 54	·1100					
6. 10	49. 5	6. 0	·1094					
6. 16	47. 55	6. 20	·1112					
6. 30	47. 40	6. 38	·1106					
6. 39	48. 35		***					
7. 30	48. 15	7. 7	·1117					
8. 15	46. 0	7. 21	·1117					
8. 29	47. 40		***					
8. 40	47. 55	8. 0	·1107					
8. 43	46. 0	8. 7	·1108					
8. 52	47. 35	8. 44	·1103					
9. 9	47. 45	8. 54	·1113					
9. 22	46. 0	9. 27	·1102					
9. 33	42. 10	9. 40	·1120					
9. 38	43. 30	9. 47	·1111					
9. 50	43. 45	9. 52	·1113					
9. 54	41. 50	10. 8	·1101					
10. 14	41. 0	10. 23	·1100					
10. 23	39. 0	10. 30	·1103					
10. 30	40. 25	10. 38	·1100					
10. 45	40. 50	10. 49	·1100					
10. 58	43. 25	10. 55	·1097					
11. 6	40. 55	11. 7	·1098					
11. 27	38. 10	11. 23	·1113					
11. 48	42. 50	11. 38	·1112					
12. 7	41. 0	11. 46	·1117					
12. 20	37. 25	12. 10	·1104					
12. 39	34. 30	12. 17	·1091					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 9		Apr. 9						
h m	° ′ ″	h m		h m		h m	°	°
12. 56	20. 35. 45	12. 44	·1104					
13. 0	43. 0	12. 55	·1099					
13. 14	37. 0	13. 0	·1104					
13. 25	37. 10	13. 4	·1080					
13. 37	34. 55	13. 22	·1094					
13. 41	36. 0	13. 37	·1115					
14. 24	21. 45	13. 56	·1094					
14. 38	25. 55	14. 23	·1121					
14. 45	25. 40	14. 52	·1092					
14. 51	31. 5	15. 0	·1097					
14. 54	39. 40	15. 15	·1094					
14. 55	42. 5	15. 23	·1096					
15. 2	41. 20	15. 37	·1094					
15. 11	39. 35	16. 0	·1104					
15. 17	42. 30	16. 14	·1099					
15. 23	42. 10	17. 16	·1097					
16. 2	48. 40	17. 54	·1108					
16. 12	51. 5	18. 25	·1102					
16. 25	51. 0	18. 43	·1106					
16. 48	49. 25	19. 34	·1091					
17. 1	49. 0	19. 42	·1095					
17. 7	50. 55		***					
17. 41	51. 15	20. 42	·1083					
18. 9	54. 20	20. 53	·1084					
18. 38	52. 30	21. 4	·1077					
19. 2	52. 40	21. 17	·1082					
	***	21. 43	·1076					
19. 45	51. 25	21. 53	·1083					
19. 56	52. 40	22. 6	·1081					
20. 2	51. 25	22. 33	·1086					
	***	22. 38	·1080					
20. 36	50. 35	22. 48	·1084					
20. 43	49. 20	23. 59	·1083					
21. 22	49. 40							
21. 29	52. 35							
21. 57	49. 5							
22. 1	47. 45							
22. 13	48. 50							
22. 21	48. 20							
22. 41	49. 0							
22. 46	50. 30							
22. 55	48. 55							
23. 4	50. 10							
23. 39	51. 30							
23. 59	51. 55							
Apr. 10		Apr. 10		Apr. 10		Apr. 10		
0. 0	20. 51. 55	0. 0	·1083		(†)	1. 0	59 ·2	57 ·7
0. 26	52. 20	0. 6	·1083	1. 30	·01733	3. 0	61 ·2	59 ·8
0. 31	51. 55	0. 14	·1079	2. 42	{·01730	9. 0	64 ·0	62 ·5
0. 50	52. 5	0. 25	·1080		{·01873	21. 0	57 ·9	57 ·1
1. 8	53. 35	0. 40	·1078	4. 27	·01752			
1. 21	52. 10	1. 4	·1085	6. 49	·01663			
1. 37	52. 0	1. 16	·1078	8. 26	·01594			
1. 43	52. 55	1. 28	·1082	12. 24	·01588			
2. 4	51. 35	1. 47	·1092	14. 58	·01635			
2. 23	52. 35	2. 4	·1089	17. 12	·01665			
2. 31	51. 10	2. 10	·1084	20. 8	·01750			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 10		Apr. 10		Apr. 10				
h m	° ′ ″	h m		h m		h m	°	°
2. 37	20. 52. 25	2. 19	·1089	22. 0	·01760			
2. 48	50. 45	2. 23	·1088	22. 48	·01730			
3. 14	51. 5	2. 27	·1094	23. 59	·01727			
3. 22	50. 0	2. 40	·1089					
3. 38	49. 35	2. 45	·1095					
3. 43	48. 55	2. 54	·1085					
3. 57	49. 15	3. 24	·1099					
5. 8	47. 50	3. 27	·1093					
7. 16	46. 40	3. 45	·1094					
7. 38	47. 30	3. 51	·1089					
8. 27	46. 55	4. 8	·1099					
8. 40	47. 15	4. 27	·1101					
10. 13	46. 0	4. 49	·1099					
11. 8	44. 10	5. 0	·1102					
12. 0	45. 5	5. 8	·1100					
13. 13	44. 0	5. 32	·1104					
13. 22	44. 35	6. 4	·1102					
14. 28	44. 45	6. 29	·1103					
14. 36	45. 35	6. 44	·1101					
15. 51	45. 40	6. 58	·1105					
16. 6	46. 5	7. 21	·1100					
17. 47	46. 0	7. 35	·1107					
18. 45	44. 30	7. 52	·1106					
19. 38	42. 55	9. 8	·1105					
19. 50	40. 0	10. 4	·1107					
19. 55	41. 35	10. 11	·1104					
20. 2	41. 0	10. 22	·1108					
20. 5	41. 50	10. 58	·1105					
20. 33	41. 55	11. 51	·1106					
20. 41	42. 40	12. 0	·1104					
20. 52	42. 0	12. 46	·1107					
21. 16	42. 15	13. 1	·1104					
21. 28	44. 15	13. 19	·1107					
21. 53	46. 0	13. 37	·1104					
22. 41	51. 45	13. 48	·1104					
23. 11	53. 35	14. 7	·1107					
23. 21	53. 10	14. 32	·1105					
23. 59	55. 15	14. 43	·1110					
		15. 2	·1104					
		15. 22	·1107					
		15. 49	·1106					
		18. 10	·1112					
		19. 45	·1105					
		21. 5	·1093					
		21. 18	·1088					
		21. 41	·1092					
		22. 4	·1089					
		22. 18	·1086					
		22. 38	·1089					
		22. 48	·1094					
		23. 4	·1095					
		23. 10	·1098					
		23. 25	·1094					
		23. 48	·1098					
		23. 55	·1102					
		23. 59	·1102					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the readings will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

April 10d. 1h.—VERTICAL FORCE.—The adjustments were altered, so that the readings were increased by $5^{div}\cdot74$, or by 0·00942 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.
Apr. 11 h m	° ′ ″
0. 0	20. 55. 15
0. 11	55. 0
0. 28	57. 0
1. 0	57. 0
1. 36	55. 50
1. 53	55. 50
2. 4	54. 40
2. 36	54. 55
3. 1	52. 50
3. 11	53. 20
3. 33	52. 0
4. 10	51. 10
4. 23	49. 40
5. 53	47. 25
6. 3	47. 30
6. 45	46. 35
7. 8	44. 45
7. 22	46. 15
	(†)
8. 13	42. 50
8. 45	45. 40
9. 0	46. 25
9. 17	47. 10
9. 31	46. 55
9. 51	47. 40
10. 8	46. 40
10. 23	47. 30
10. 38	46. 45
12. 0	46. 25
12. 10	47. 5
12. 33	45. 50
12. 53	45. 15
13. 8	47. 15
13. 23	45. 25
13. 46	46. 0
14. 14	43. 55
15. 41	46. 0
16. 22	45. 5
16. 31	45. 45
17. 49	44. 35
19. 1	42. 0
19. 25	42. 5
20. 0	41. 0
20. 15	41. 50
20. 23	41. 0
20. 32	42. 5
21. 3	43. 50
21. 25	47. 25
21. 54	48. 25
22. 24	51. 0
23. 32	53. 5
23. 43	54. 35
23. 59	55. 0
Apr. 12	
0. 0	20. 55. 0
0. 55	57. 20
1. 26	57. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 11 h m	
0. 0	·1102
0. 9	·1102
0. 20	·1103
0. 49	·1099
1. 20	·1101
1. 30	·1099
1. 45	·1102
2. 0	·1101
2. 23	·1108
2. 58	·1101
3. 15	·1107
3. 32	·1104
3. 44	·1108
3. 48	·1107
4. 10	·1113
4. 34	·1100
4. 49	·1100
5. 32	·1107
5. 38	·1109
6. 0	·1112
7. 12	·1110
7. 22	·1099
	(†)
8. 14	·1117
8. 36	·1113
8. 50	·1113
8. 57	·1111
9. 36	·1111
9. 53	·1114
10. 9	·1111
10. 25	·1111
10. 50	·1107
12. 8	·1108
12. 16	·1111
12. 38	·1108
12. 54	·1109
13. 12	·1114
13. 50	·1108
14. 7	·1110
14. 38	·1107
18. 44	·1111
20. 26	·1098
20. 32	·1100
20. 57	·1095
21. 8	·1096
21. 21	·1095
21. 41	·1092
22. 51	·1099
23. 15	·1099
23. 39	·1101
23. 59	·1103
Apr. 12	
0. 0	·1103
0. 49	·1103
1. 0	·1107

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 11 h m	
0. 0	·01727
0. 56	·01713
2. 44	·01708
3. 17	·01720
4. 25	·01640
7. 45	·01660
10. 4	·01627
20. 15	·01864
21. 23	·01860
23. 59	·01864
Apr. 12	
0. 0	·01864
2. 14	·01880
4. 10	·01850

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 11 h m	°	°
1. 0	59·0	58·0
3. 0	59·7	58·8
9. 0	59·9	58·0
21. 0	55·0	54·1
Apr. 12		
9. 0	59·4	56·7
21. 0	52·9	52·3

Greenwich Mean Solar Time.	Western Declination.
Apr. 12 h m	° ′ ″
1. 45	20. 56. 30
2. 8	53. 55
2. 46	53. 0
3. 26	50. 50
3. 37	51. 0
4. 37	48. 10
6. 9	46. 55
6. 45	47. 35
7. 30	46. 5
8. 23	47. 0
8. 35	46. 5
8. 58	47. 0
9. 3	43. 35
9. 8	46. 55
9. 23	41. 5
9. 44	43. 5
10. 7	41. 0
10. 33	43. 5
10. 56	43. 30
11. 50	47. 15
12. 13	47. 10
12. 58	45. 0
13. 17	46. 0
13. 29	45. 50
13. 43	43. 55
13. 56	44. 0
14. 52	42. 10
15. 41	45. 5
16. 1	44. 40
16. 13	45. 0
16. 44	41. 50
17. 22	44. 35
17. 33	43. 55
17. 58	44. 55
18. 16	43. 25
19. 42	42. 0
19. 54	42. 45
20. 10	41. 10
21. 2	44. 15
21. 53	52. 0
	***
22. 43	53. 55
22. 58	56. 0
23. 20	54. 40
23. 48	56. 55
23. 59	56. 30
Apr. 13	
0. 0	20. 56. 30
0. 15	56. 35
1. 0	58. 20
1. 7	20. 57. 15
1. 22	21. 4. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 12 h m	
1. 22	·1107
2. 15	·1097
3. 0	·1107
3. 35	·1107
3. 45	·1111
4. 0	·1110
4. 8	·1113
4. 45	·1108
5. 0	·1113
5. 16	·1111
5. 43	·1112
6. 0	·1119
6. 19	·1120
6. 45	·1114
7. 4	·1118
7. 27	·1117
7. 45	·1120
8. 6	·1114
8. 24	·1112
9. 0	·1111
9. 21	·1122
9. 47	·1110
10. 8	·1114
10. 58	·1110
12. 4	·1114
12. 23	·1117
12. 45	·1114
13. 13	·1113
13. 47	·1124
14. 34	·1116
15. 38	·1121
15. 50	·1124
16. 4	·1121
16. 34	·1124
17. 14	·1111
17. 34	·1113
17. 59	·1117
18. 26	·1117
19. 39	·1110
19. 40	·1104
19. 59	·1101
20. 19	·1102
21. 7	·1091
21. 45	·1089
22. 0	·1085
22. 30	·1086
22. 53	·1093
23. 13	·1088
23. 43	·1097
23. 51	·1096
23. 59	·1097
Apr. 13	
0. 0	·1097
0. 7	·1099
	(†)
0. 45	·1106
1. 25	·1108

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 12 h m	
7. 36	·01648
9. 21	·01620
14. 30	·01693
15. 54	·01735
16. 56	·01743
19. 45	·01880
21. 28	·01863
22. 38	·01880
23. 59	·01864
Apr. 13	
0. 0	·01864
1. 38	·01845
3. 8	·01843
3. 55	·01760
7. 8	·01595

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 13 h m	°	°
1. 0	55·8	54·0
3. 0	57·9	56·1
9. 0	58·8	56·0
21. 0	49·3	47·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 11. The Declination and Horizontal Force photographic cylinder was stopped from $7^h.\ 22^m.$ to $8^h.\ 13^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 13		Apr. 13		Apr. 13		h m	°	°
h m	° ′ ″	h m		h m				
1. 32	20. 58. 20	1. 37	·1117	11. 17	·01584			
1. 55	54. 35	1. 43	·1117	13. 40	·01645			
4. 14	48. 20	2. 38	·1135	18. 45	·01900			
4. 49	47. 30	2. 54	·1134	21. 20	·01890			
5. 20	47. 40	3. 5	·1137	23. 59	·01899			
5. 51	46. 25	3. 18	·1136					
7. 6	47. 25	3. 45	·1144					
7. 24	46. 30	4. 20	·1140					
7. 45	47. 0	4. 31	·1143					
8. 25	41. 45	5. 7	·1140					
8. 56	44. 30	5. 40	·1144					
8. 59	43. 5	6. 18	·1137					
9. 3	45. 0	6. 36	·1138					
9. 32	44. 15	6. 49	·1134					
10. 5	46. 55	7. 11	·1133					
10. 30	46. 10	7. 45	·1141					
10. 43	47. 10	8. 8	·1134					
12. 11	47. 0	8. 37	·1137					
12. 24	46. 5	9. 21	·1129					
13. 0	46. 25	9. 46	·1127					
13. 28	47. 45	10. 3	·1128					
14. 15	44. 40	10. 25	·1125					
14. 23	45. 35	10. 47	·1127					
	***	11. 7	·1126					
16. 5	45. 5	11. 55	·1124					
17. 5	46. 0	12. 11	·1127					
17. 36	44. 25	12. 22	·1125					
17. 59	45. 0	12. 54	·1123					
18. 45	43. 50	13. 24	·1126					
19. 32	43. 35	14. 34	·1122					
19. 54	42. 30	16. 57	·1123					
	***	17. 42	·1126					
20. 36	43. 35	18. 52	·1118					
20. 45	42. 35	19. 14	·1119					
21. 19	45. 20	20. 50	·1109					
21. 48	46. 0	21. 6	·1109					
22. 2	47. 35	21. 16	·1111					
22. 35	48. 20	21. 43	·1108					
23. 2	50. 35	22. 4	·1110					
23. 18	50. 0	22. 33	·1108					
23. 59	52. 20	22. 58	·1111					
		23. 19	·1110					
		23. 37	·1112					
		23. 59	·1112					
Apr. 14		Apr. 14		Apr. 14		Apr. 14		
0. 0	20. 52. 20	0. 0	·1112	0. 0	·01899	1. 0	51 ·6	51 ·0
0. 53	53. 25	0. 11	·1112	1. 5	·01910	3. 0	54 ·8	54 ·0
1. 56	52. 20	0. 24	·1114		·01740	9. 0	58 ·0	56 ·8
2. 13	53. 0	0. 53	·1117	3. 1	·01760	21. 0	49 ·5	49 ·0
2. 44	51. 0	1. 21	·1117		·01840	22. 0	50 ·5	50 ·5
4. 45	47. 10	1. 34	·1119	5. 19	·01680	23. 0	51 ·9	51 ·9
7. 17	46. 55	2. 12	·1132	11. 10	·01605			
9. 23	48. 0	2. 38	·1125	12. 23	·01620			
10. 25	46. 20	3. 3	·1124	17. 19	·01750			
11. 16	46. 55	3. 10	·1128	20. 18:	·01880			
11. 40	46. 10	3. 25	·1130	21. 26	·01880			
14. 0	45. 55	3. 40	·1129	23. 28	·01925			
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 14		Apr. 14		Apr. 14		h m	°	°
h m	° ′ ″	h m		h m				
17. 45	20. 43. 50	3. 47	·1124	23. 59	·01900			
18. 18	44. 50	4. 7	·1125					
19. 26	41. 35	4. 32	·1130					
20. 7	41. 35	4. 47	·1129					
20. 14	42. 30	5. 3	·1122					
20. 54	43. 0	5. 21	·1124					
21. 5	44. 55	5. 38	·1123					
21. 44	46. 25	6. 20	·1126					
22. 51	51. 45	6. 45	·1123					
23. 20	53. 5	7. 23	·1124					
23. 37	55. 15	7. 44	·1123					
23. 59	55. 25	8. 47	·1123					
		9. 6	·1124					
		9. 16	·1122					
		9. 58	·1121					
		10. 16	·1123					
		10. 57	·1123					
		11. 32	·1126					
		11. 44	·1125					
		11. 54	·1128					
		12. 12	·1128					
		12. 22	·1126					
		12. 53	·1127					
		16. 54	·1134					
		17. 30	·1134					
		18. 2	·1132					
		18. 30	·1132					
		18. 53	·1129					
		19. 30	·1130					
		21. 8	·1120					
		21. 38	·1116					
		22. 26	·1115					
		23. 15	·1114					
		23. 35	·1119					
		23. 59	·1116					
Apr. 15		Apr. 15		Apr. 15		Apr. 15		
0. 0	20. 55. 25	0. 0	·1116	0. 0	·01900	0. 0	53 ·3	53 ·3
0. 28	57. 10	0. 12	·1114	1. 30	·01865	1. 0	54 ·8	54 ·4
0. 41	56. 30	0. 18	·1117	1. 52	·01860	3. 0	58 ·0	58 ·0
0. 51	58. 0	0. 20	·1117	3. 8	·01800	6. 0	61 ·8	60 ·8
1. 38	54. 20	0. 34	·1118	3. 37	·01727	9. 0	62 ·0	59 ·2
2. 10	54. 50	0. 47	·1128	5. 18	·01650	12. 0	60 ·0	57 ·6
2. 22	52. 5	1. 5	·1124		·01740	18. 0	55 ·3	54 ·5
2. 31	55. 30	1. 36	·1122	6. 0	·01710	21. 0	54 ·3	53 ·9
2. 44	55. 5	2. 11	·1131	6. 12	·01740	22. 0	54 ·5	54 ·4
2. 55	56. 0	2. 22	·1120	6. 24	·01710	23. 0	55 ·0	55 ·0
3. 3	54. 25	2. 39	·1143	6. 30	·01720			
3. 25	55. 15	3. 0	·1157	6. 40	·01700			
3. 34	53. 50	3. 11	·1152	6. 46	·01710			
3. 46	55. 55	3. 30	·1143	7. 24	·01640			
3. 57	53. 35	3. 46	·1132	8. 27	·01586			
4. 8	53. 30	3. 56	·1136	10. 0	·01550			
4. 16	54. 20	4. 12	·1130	10. 22	·01560			
4. 24	53. 40	4. 26	·1129	10. 40	·01553			
4. 46	56. 15	4. 54	·1148	10. 52	·01563			
4. 58	54. 35	5. 0	·1144	11. 38	·01535			
5. 15	53. 55	5. 5	·1147	12. 0	·01487			

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet	Of V. F. Magnet.
Apr. 15		Apr. 15		Apr. 15				
h m	° ′ ″	h m		h m		h m	°	°
5. 23	20. 54. 50	5. 18	·1143	12. 38	·01495			
5. 48	53. 10	5. 30	·1153	13. 0	·01540			
5. 58	50. 5	5. 37	·1148	13. 15	·01540			
6. 12	55. 40	5. 54	·1148	13. 27	·01560			
6. 22	49. 55	6. 4	·1144	13. 45	·01487			
6. 27	50. 25	6. 11	·1161	14. 0	·01490			
6. 40	42. 5	6. 25	·1113	15. 8	·01605			
6. 53	41. 5	6. 31	·1117	16. 23	·01670			
7. 9	43. 10	6. 43	·1105	16. 48	·01652			
7. 22	41. 35	6. 50	·1116	17. 23	·01700			
7. 34	43. 30	6. 54	·1114	18. 8	·01720			
7. 38	42. 50	7. 4	·1116	19. 9	·01778			
8. 1	42. 30	7. 22	·1099	22. 48	·01885			
8. 16	43. 25	7. 38	·1108	23. 59	·01933			
8. 36	45. 50	8. 17	·1107					
9. 23	48. 5	8. 27	·1103					
9. 30	46. 55	8. 41	·1112					
9. 43	47. 25	8. 45	·1110					
9. 56	40. 5	9. 5	·1117					
10. 7	39. 30	9. 15	·1110					
10. 12	40. 50	9. 33	·1111					
10. 15	38. 30	9. 59	·1086					
10. 26	35. 40	10. 5	·1086					
10. 38	31. 50	10. 13	·1073					
10. 53	33. 5	10. 18	·1076					
11. 16	40. 20	10. 21	·1072					
11. 29	48. 15	10. 25	·1075					
11. 36	46. 30	10. 32	·1066					
11. 44	49. 0	10. 45	·1076					
11. 53	46. 25	10. 51	·1072					
12. 0	41. 45	11. 8	·1083					
12. 1	43. 25	11. 17	·1079					
12. 36	31. 25	11. 34	·1084					
12. 54	35. 20	11. 47	·1094					
13. 13	35. 20	12. 0	·1090					
13. 25	38. 55	12. 16	·1104					
13. 37	36. 20	12. 30	·1102					
13. 53	26. 15	12. 48	·1092					
14. 0	27. 5	12. 57	·1096					
14. 6	26. 25	13. 11	·1091					
14. 28	32. 55	13. 18	·1091					
15. 4	41. 50	13. 40	·1125					
15. 20	43. 15	14. 13	·1114					
15. 34	39. 10	14. 25	·1105					
15. 53	40. 35	14. 42	·1103					
16. 10	39. 30	14. 49	·1099					
16. 23	40. 35	15. 2	·1099					
16. 30	42. 35	15. 13	·1103					
16. 53	43. 0	15. 22	·1099					
17. 11	46. 25	15. 29	·1106					
17. 32	46. 50	15. 32	·1101					
17. 42	45. 10	15. 38	·1110					
17. 58	44. 5	15. 41	·1106					
18. 10	44. 55	15. 45	·1108					
18. 30	41. 0	15. 51	·1107					
18. 40	44. 10	16. 25	·1122					
18. 50	42. 50	17. 2	·1086					
19. 7	44. 45	17. 16	·1082					
Apr. 15		Apr. 15						
h m	° ′ ″	h m						
19. 30	20. 46. 25	17. 26	·1091					
19. 41	49. 10	17. 34	·1090					
20. 1	48. 45	18. 0	·1099					
	***	18. 20	·1090					
20. 24	44. 55	18. 45	·1084					
20. 43	45. 0	18. 51	·1088					
21. 16	47. 55	19. 13	·1083					
21. 23	47. 10	19. 19	·1089					
21. 35	49. 50	19. 23	·1085					
21. 53	50. 15	19. 35	·1096					
21. 56	49. 30	19. 55	·1098					
22. 22	53. 0	20. 20	·1090					
22. 41	53. 5	20. 38	·1093					
23. 10	56. 0	21. 14	·1092					
23. 31	54. 45	21. 22	·1087					
23. 50	56. 10	21. 34	·1085					
23. 59	55. 0	21. 49	·1075					
		22. 8	·1080					
		22. 21	·1079					
		22. 47	·1081					
		22. 54	·1087					
		22. 59	·1082					
		23. 13	·1093					
		23. 23	·1090					
			(†)					
Apr. 16		Apr. 16		Apr. 16		Apr. 16		
0. 0	20. 55. 0		(†)	0. 0	·01933	0. 0	55 ·9	56 ·0
0. 14	54. 20	0. 8	·1094	0. 33	·01880	1. 0	57 ·0	57 ·4
0. 21	55. 10	0. 36	·1103	1. 58	·01903	3. 0	59 ·8	60 ·5
0. 39	55. 40	0. 47	·1090	3. 3	·01833	9. 0	63 ·2	62 ·1
0. 51	54. 10	1. 8	·1090	4. 39	·01630	21. 0	56 ·0	54 ·8
1. 4	54. 15	1. 44	·1105		·01725			
1. 13	53. 20	2. 10	·1106	5. 30	·01660			
1. 23	54. 40	2. 19	·1101	8. 33	·01555			
1. 28	53. 40	2. 37	·1105	9. 8	·01513			
1. 58	53. 55	2. 42	·1102	11. 15	·01487			
2. 9	52. 5	2. 45	·1107	14. 20	·01540			
2. 15	52. 15	3. 0	·1099	16. 24	·01622			
2. 30	50. 10	3. 30	·1117	16. 45	·01620			
2. 38	51. 0	3. 38	·1115	19. 43	·01822			
2. 45	49. 0	3. 42	·1119	20. 50	·01880			
3. 8	47. 30	4. 8	·1122	23. 14	·01920			
3. 37	47. 55	4. 33	·1116	23. 59	·01883			
3. 54	49. 0	4. 54	·1115					
4. 27	48. 5	5. 15	·1117					
5. 2	48. 45	5. 38	·1117					
5. 23	47. 55	5. 43	·1119					
5. 45	42. 10	5. 50	·1116					
6. 3	44. 0	6. 22	·1114					
6. 29	42. 55	6. 28	·1116					
7. 4	46. 20	6. 38	·1113					
7. 23	45. 10	6. 56	·1121					
7. 32	46. 10	7. 10	·1121					
7. 53	46. 0	7. 29	·1113					
8. 2	40. 0	7. 45	·1116					
8. 15	30. 15	8. 0	·1112					
8. 23	36. 40	8. 8	·1113					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Apr. 16	
h m	° ′ ″
8. 31	20. 37. 25
8. 37	36. 10
8. 53	40. 5
8. 54	44. 10
9. 6	42. 0
9. 20	46. 15
10. 13	47. 25
11. 6	46. 5
12. 16	46. 45
12. 57	44. 0
13. 7	46. 50
13. 58	43. 0
14. 46	43. 5
15. 14	39. 0
	***
15. 58	38. 0
16. 10	42. 5
16. 23	42. 55
16. 39	40. 55
	***
17. 45	38. 40
18. 9	39. 50
	***
19. 13	40. 40
19. 38	40. 5
20. 13	44. 0
20. 22	46. 10
20. 34	44. 15
20. 54	47. 0
21. 18	47. 10
22. 51	50. 10
22. 57	49. 25
23. 0	51. 40
23. 8	51. 5
23. 23	53. 10
23. 44	52. 50
23. 59	53. 40
Apr. 17	
0. 0	20. 53. 40
0. 20	54. 30
0. 28	54. 5
0. 45	54. 55
0. 57	57. 20
1. 23	54. 0
1. 39	53. 55
3. 4	49. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 16	
h m	
8. 21	·1109
8. 30	·1129
8. 39	·1121
8. 48	·1113
8. 54	·1118
9. 9	·1101
9. 18	·1104
9. 31	·1099
10. 47	·1104
11. 3	·1102
11. 49	·1102
12. 15	·1107
12. 53	·1105
13. 8	·1102
13. 19	·1104
13. 38	·1101
13. 58	·1104
14. 16	·1103
14. 56	·1108
15. 53	·1096
16. 19	·1113
16. 39	·1117
17. 2	·1110
17. 20	·1107
17. 43	·1105
17. 54	·1107
18. 48	·1108
18. 55	·1099
19. 24	·1093
19. 40	·1094
20. 10	·1075
20. 53	·1095
21. 6	·1093
21. 13	·1094
21. 25	·1089
22. 1	·1088
22. 10	·1091
22. 28	·1089
22. 41	·1092
22. 56	·1087
23. 0	·1096
23. 7	·1090
23. 20	·1095
23. 30	·1090
23. 39	·1089
23. 45	·1085
23. 54	·1090
23. 59	·1088
Apr. 17	
0. 0	·1088
0. 22	·1090
0. 35	·1087
0. 52	·1091
1. 5	·1104
1. 28	·1094
2. 22	·1107
2. 38	·1105

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 17	
0. 0	·01883
2. 50:	·01850
4. 40:	·01645
6. 48	·01580
10. 37	·01560
11. 31	·01570
11. 52	·01590
13. 24	·01600

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 17		
1. 0	57·0	57·0
3. 0	58·8	59·2
9. 0	61·0	59·2
21. 0	55·5	54·8

Greenwich Mean Solar Time.	Western Declination.
Apr..	
h m	° ′ ″
4. 16	20. 47. 0
5. 54	45. 15
6. 2	45. 40
6. 23	44. 25
7. 15	43. 35
7. 42	45. 5
7. 52	44. 35
8. 8	46. 0
8. 27	45. 25
8. 34	46. 15
9. 4	46. 30
9. 28	45. 0
9. 37	45. 0
9. 51	43. 10
10. 6	44. 25
10. 27	44. 35
10. 43	43. 35
10. 59	44. 30
11. 18	42. 5
11. 36	42. 10
11. 48	43. 40
12. 2	42. 20
12. 40	43. 45
13. 22	47. 25
13. 45	44. 30
14. 0	44. 0
14. 16	40. 40
14. 32	44. 0
14. 49	46. 55
15. 10	41. 25
15. 20	44. 0
15. 40	45. 25
16. 6	48. 20
16. 30	49. 35
17. 11	42. 40
17. 37	43. 0
18. 15	41. 55
18. 20	42. 15
18. 31	39. 15
18. 46	42. 40
18. 52	45. 0
19. 2	43. 5
19. 8	44. 25
19. 17	41. 10
19. 23	42. 50
19. 29	40. 10
19. 33	42. 0
19. 41	40. 20
19. 50	42. 10
20. 47	42. 5
21. 0	43. 30
21. 8	42. 35
21. 18	45. 0
21. 26	43. 45
21. 53	49. 10
22. 23	49. 50
23. 8	53. 5
23. 30	55. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 17	
h m	
3. 28	·1112
3. 34	·1110
3. 47	·1114
3. 58	·1112
4. 15	·1111
4. 26	·1116
4. 30	·1114
5. 16	·1119
5. 30	·1118
6. 8	·1129
6. 30	·1117
6. 45	·1113
7. 13	·1119
7. 41	·1122
7. 58	·1119
8. 10	·1124
8. 35	·1110
9. 8	·1109
9. 23	·1109
9. 49	·1115
9. 57	·1119
10. 9	·1114
10. 19	·1116
10. 36	·1111
10. 45	·1116
11. 8	·1111
11. 37	·1108
11. 53	·1114
12. 11	·1115
12. 25	·1107
12. 45	·1115
13. 2	·1112
13. 20	·1121
13. 25	·1121
13. 55	·1131
14. 23	·1131
14. 45	·1115
14. 53	·1116
15. 20	·1103
15. 38	·1106
15. 47	·1111
16. 0	·1112
16. 20	·1095
16. 33	·1106
16. 47	·1111
17. 8	·1107
17. 40	·1110
18. 23	·1109
18. 37	·1114
18. 59	·1109
19. 43	·1093
20. 4	·1093
20. 19	·1086
20. 38	·1083
20. 45	·1085
20. 57	·1076
21. 9	·1078
21. 19	·1077

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 17	
h m	
14. 38	·01585
14. 55	·01610
15. 10	·01608
15. 38	·01650
16. 27	·01570
16. 39	·01686
17. 0	·01690
17. 42	·01750
20. 17	·01857
23. 59	·01910

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 17		Apr. 17						
h m	° ′ ″	h m		h m		h m	°	°
23. 51	20. 55. 10	21. 27	·1081					
23. 59	54. 5	21. 38	·1077					
		21. 50	·1082					
		22. 0	·1081					
		22. 14	·1076					
		22. 36	·1083					
		23. 0	·1087					
		23. 35	·1084					
		23. 46	·1085					
		23. 55	·1083					
		23. 59	·1083					
Apr. 18		Apr. 18		Apr. 18		Apr. 18		
0. 0	20. 54. 5	0. 0	·1083	0. 0	·01910	1. 0	57·0	56·8
0. 10	53. 0	0. 15	·1093	3. 0	·01940	3. 0	58·5	57·5
0. 14	55. 20	0. 21	·1094	7. 30:	·01720	9. 0	59·7	57·2
0. 24	55. 40	0. 42	·1093	12. 33	·01818	22. 0	49·4	49·8
0. 43	54. 0	0. 59	·1100	13. 15:	·01820			
1. 1	55. 0	1. 8	·1097	14. 0	·01875			
1. 24	53. 55	1. 45	·1102	15. 20	·01890			
2. 22	53. 20	2. 26	·1107	15. 45	·01880			
2. 53	51. 40	2. 58	·1108	18. 33	·01936			
3. 18	51. 25	3. 17	·1115	21. 30	·01900			
3. 35	48. 55	3. 29	·1106	23. 59	·01940			
	(†)	3. 35	·1107					
4. 20	44. 30		(†)					
4. 28	44. 25	4. 20	·1127					
4. 48	45. 15	4. 30	·1127					
4. 55	46. 50	4. 38	·1132					
5. 8	46. 55	4. 49	·1128					
5. 23	45. 55	5. 8	·1128					
6. 6	45. 50	5. 39	·1116					
6. 13	46. 20	5. 47	·1116					
6. 27	44. 40	5. 59	·1110					
6. 47	46. 0	6. 15	·1116					
7. 2	45. 10	6. 22	·1112					
7. 37	44. 15	6. 53	·1114					
8. 1	45. 0	7. 0	·1112					
8. 31	43. 55	7. 11	·1114					
8. 58	44. 50	7. 24	·1110					
9. 23	43. 20	7. 55	·1115					
10. 45	45. 0	8. 20	·1109					
11. 46	39. 0	8. 38	·1112					
	***	8. 52	·1112					
12. 20	41. 0	9. 2	·1107					
	***	9. 34	·1108					
13. 17	36. 5	9. 47	·1107					
13. 38	38. 35	10. 32	·1111					
14. 7	39. 40	11. 17	·1107					
15. 12	51. 5	11. 31	·1113					
15. 49	45. 10	11. 47	·1111					
16. 11	43. 20	12. 0	·1107					
16. 43	45. 5	12. 39	·1119					
18. 45	41. 50	13. 8	·1110					
18. 56	38. 10	13. 38	·1109					
19. 10	40. 0	14. 9	·1113					
	***	14. 28	·1111					
20. 13	41. 5	14. 44	·1102					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 18		Apr. 18						
h m	° ′ ″	h m		h m		h m	°	°
20. 51	20. 45. 35	15. 9	·1109					
21. 15	49. 20	15. 20	·1116					
21. 29	49. 20	15. 40	·1118					
	(†)	16. 12	·1126					
22. 6	49. 25	16. 55	·1116					
22. 17	51. 45	17. 53	·1115					
23. 9	50. 30	18. 43	·1109					
23. 59	52. 5	18. 49	·1104					
		19. 8	·1109					
		19. 52	·1099					
		20. 32	·1083					
		21. 1	·1077					
		21. 26	·1081					
		21. 33	·1078					
		21. 59	·1085					
		22. 15	·1082					
		22. 38	·1083					
		23. 47	·1102					
		23. 59	·1101					
Apr. 19		Apr. 19		Apr. 19		Apr. 19		
0. 0	20. 52. 5	0. 0	·1101	0. 0	·01940	7. 30	61·5	58·5
0. 12	55. 5	0. 17	·1108	2. 4:	·01965	21. 0	50·9	51·0
0. 48	57. 30	0. 31	·1106	4. 0	·01877			
1. 0	57. 0	0. 54	·1106	4. 24	·01875			
1. 16	55. 25	1. 19	·1100	6. 18	·01677			
1. 32	55. 20	1. 32	·1105	7. 28	·01627			
1. 59	53. 30	1. 47	·1102		·01674			
2. 40	52. 35	2. 2	·1104	9. 21:	·01560			
3. 23	52. 10	2. 24	·1112	10. 53	·01560			
3. 29	51. 5	2. 45	·1114	11. 23	·01540			
3. 45	51. 35	3. 14	·1124	11. 43:	·01542			
4. 8	46. 25	3. 21	·1123	12. 3:	·01500			
4. 26	47. 20	3. 39	·1129	12. 25	·01538			
4. 45	46. 25	3. 56	·1122	12. 54	·01540			
5. 43	46. 35	4. 22	·1136	13. 38:	·01596			
5. 56	47. 25	4. 29	·1136	13. 55	·01590			
6. 38	45. 35	4. 36	·1133	14. 25	·01630			
7. 0	46. 30	4. 54	·1137	15. 46	·01720			
7. 9	44. 50	5. 20	·1127	19. 33	·01877			
7. 28	45. 50	5. 30	·1126	22. 58	·01975			
7. 40	43. 55	5. 54	·1131	23. 59	·01975			
7. 48	41. 35	6. 38	·1129					
8. 2	40. 45	6. 46	·1132					
9. 6	46. 0	7. 0	·1129					
9. 54	46. 20	7. 45	·1105					
10. 4	47. 0	8. 19:	·1103					
10. 19	47. 25	9. 21	·1113					
10. 55	42. 45	10. 17	·1121					
11. 13	44. 0	10. 43	·1116					
11. 37	39. 40	10. 53	·1118					
11. 59	50. 10	11. 38	·1096					
12. 24	39. 0	11. 50	·1102					
12. 38	41. 10	12. 2	·1100					
13. 18	36. 10	12. 18	·1115					
13. 55	47. 15	13. 0	·1101					
14. 16	43. 35	13. 13	·1108					
14. 35	45. 20	13. 25	·1107					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 18. The Declination and Horizontal Force photographic cylinder was stopped from $3^h.\ 35^m.$ to $4^h.\ 20^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 19		Apr. 19						
h m	° ′ ″	h m		h m		h m	°	°
14. 59	20. 44. 5	13. 39	·1113					
		14. 3	·1108					
16. 8	44. 30	14. 20	·1112					
16. 49	41. 30	14. 44	·1108					
17. 15	43. 25	15. 27	·1110					
17. 53	44. 20	16. 23:	·1114					
18. 22	46. 0	17. 16:	·1107					
18. 58	44. 0	18. 7	·1116					
19. 6	41. 20	18. 48	·1113					
19. 15	42. 55	18. 54	·1115					
19. 28	40. 5	19. 4	·1113					
19. 38	42. 0	19. 18	·1116					
19. 52	43. 30	19. 52	·1108					
20. 24	43. 0	20. 23	·1105					
20. 43	41. 5	20. 49	·1105					
20. 50	42. 30	21. 7	·1104					
21. 30	43. 35	21. 21	·1105					
21. 53	47. 35	21. 43	·1096					
22. 6	47. 0	22. 22	·1092					
22. 47	51. 25	23. 2	·1105					
23. 51	52. 0	23. 14	·1104					
23. 59	52. 55	23. 38	·1116					
		23. 47	·1114					
		23. 59	·1116					
Apr. 20		Apr. 20		Apr. 20		Apr. 20		
0. 0	20. 52. 55	0. 0	·1116	0. 0	·01975	1. 0	54 ·9	54 ·3
0. 13	54. 20	0. 15	·1120	2. 16	·01974	3. 0	57 ·9	57 ·7
0. 24	53. 55	0. 26	·1119	3. 44	·01872	9. 0	61 ·0	59 ·0
0. 42	54. 20	0. 47	·1117	4. 12	·01850	21. 0	51 ·9	51 ·0
0. 45	55. 35	1. 7	·1121	4. 59	·01757			
1. 17	57. 0	1. 15	·1119	5. 56:	·01657			
1. 31	55. 20	1. 25	·1120	6. 43	·01650			
1. 45	52. 40	1. 46	·1104	7. 15	·01550			
2. 8	55. 5	2. 17	·1122	12. 18	·01490			
2. 32	53. 50	3. 16	·1123	16. 34	·01730			
2. 47	54. 45	3. 23	·1128	19. 55	·02000			
3. 0	53. 0	3. 30	·1128	21. 55	·01960			
3. 13	54. 0	3. 50	·1113	22. 56	·02000			
3. 37	50. 35	4. 17	·1145	23. 59	·01980			
3. 58	45. 25	4. 30	·1141					
4. 18	47. 40	4. 58	·1128					
4. 28	46. 45	5. 35	·1124					
4. 39	47. 30	5. 53:	·1119					
5. 13	49. 0	6. 15	·1127					
5. 40	47. 30	6. 44	·1117					
5. 54	47. 25	7. 1	·1117					
6. 3	48. 15	7. 10	·1120					
6. 22	46. 25	7. 16	·1119					
7. 7	47. 0	7. 31	·1122					
7. 38	45. 30	7. 52	·1116					
8. 0	42. 25	8. 14	·1128					
8. 13	44. 50	8. 25	·1120					
8. 26	37. 40	8. 38	·1129					
8. 57	42. 30	9. 7	·1113					
9. 1	39. 35	9. 15	·1113					
9. 29	43. 10	9. 33	·1101					
9. 38	41. 25	9. 48	·1105					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 20		Apr. 20						
h m	° ′ ″	h m		h m		h m	°	°
10. 0	20. 45. 30	10. 8	·1103					
10. 19	44. 25	10. 29	·1107					
10. 44	47. 5	10. 53	·1112					
10. 57	46. 0	11. 4	·1109					
11. 28	45. 35	11. 45	·1119					
11. 48	46. 45	11. 59	·1111					
12. 28	39. 0	12. 34	·1110					
12. 37	39. 45	12. 47	·1104					
12. 43	38. 40	13. 1	·1108					
12. 53	40. 0	13. 37	·1105					
13. 0	39. 20	13. 46	·1107					
13. 12	41. 40	14. 43	·1111					
13. 41	41. 10	14. 58	·1107					
13. 59	45. 5	15. 27	·1111					
14. 39	44. 20	16. 13	·1111					
15. 0	45. 35	16. 23	·1108					
15. 45	45. 55	16. 34	·1111					
16. 25	47. 50	16. 44	·1109					
	***	16. 58	·1114					
17. 15	44. 0	17. 9	·1114					
	***	17. 15	·1112					
17. 52	43. 50	17. 23	·1115					
	***	18. 8	·1112					
18. 27	40. 50	18. 45	·1113					
18. 34	41. 55	18. 56	·1114					
18. 40	40. 5	19. 20	·1105					
18. 54	44. 10	19. 34	·1106					
19. 22	39. 20	19. 55	·1100					
19. 32	41. 55	20. 0	·1100					
19. 49	43. 0	20. 11	·1097					
19. 54	41. 20	20. 23	·1099					
20. 3	41. 45	20. 43	·1096					
20. 17	40. 55	21. 43	·1086					
20. 36	43. 0	22. 0	·1086					
20. 51	41. 5	22. 8	·1088					
20. 59	42. 20	22. 32	·1080					
21. 36	43. 40	22. 52	·1090					
22. 22	48. 50	23. 13	·1096					
23. 24	51. 0	23. 23	·1096					
23. 59	51. 45	23. 37	·1101					
		23. 50	·1101					
		23. 59	·1098					
Apr. 21		Apr. 21		Apr. 21		Apr. 21		
0. 0	20. 51. 45	0. 0	·1098	0. 0	·01980	1. 0	54 ·9	53 ·8
0. 15	51. 5	0. 6	·1095	2. 40	·01943	3. 0	56 ·3	55 ·0
0. 27	52. 0	0. 33	·1099	5. 34	·01835	9. 0	57 ·7	56 ·5
0. 38	51. 50	0. 45	·1104	9. 36	·01727	21. 0	53 ·0	53 ·0
0. 44	53. 50	0. 53	·1102	11. 50	·01720	22. 0	53 ·5	53 ·9
0. 58	53. 40	1. 9	·1106	14. 11	·01780	23. 0	54 ·2	54 ·3
1. 9	54. 40	1. 30	·1104	14. 34	·01770			
1. 30	52. 35	1. 41	·1108	15. 10	·01780			
1. 38	53. 0	2. 0	·1106	16. 41	·01870			
1. 54	52. 0	2. 48	·1120	18. 45	·01950			
2. 23	50. 55	3. 7	·1113	23. 59	·01940			
2. 45	51. 0	3. 23	·1112					
2. 59	49. 20	3. 38	·1117					
3. 57	47. 5	4. 32	·1121					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 21		Apr. 21						
h m	° ′ ″	h m		h m		h m	°	°
4. 44	20. 46. 15	4. 44	·1121					
6. 24	45. 0	5. 1	·1122					
7. 1	41. 35	5. 15	·1125					
7. 20	41. 40	5. 33	·1125					
7. 36	42. 45	5. 46	·1129					
7. 43	42. 35	6. 1	·1126					
9. 19	45. 10	6. 20	·1127					
9. 33	42. 55	6. 40	·1126					
10. 13	46. 20	6. 54	·1128					
10. 23	45. 20	6. 59	·1126					
10. 37	45. 55	7. 8	·1127					
10. 46	44. 55	7. 40	·1118					
11. 8	45. 45	7. 52	·1120					
11. 32	44. 50	8. 28	·1116					
11. 53	45. 0	8. 41	·1118					
12. 8	46. 5	8. 56	·1116					
12. 32	44. 15		(†)					
13. 6	43. 30	9. 0	·1119*					
13. 56	47. 0	21. 0	·1096*					
14. 16	49. 35							
14. 45	45. 15							
15. 0	43. 0							
16. 10	44. 50							
16. 32	44. 20							
16. 50	45. 5							
17. 32	45. 10							
18. 21	42. 50							
18. 38	44. 0							
18. 54	43. 55							
19. 47	40. 20							
19. 57	41. 0							
20. 15	40. 5							
20. 50	42. 30							
20. 58	42. 0							
21. 30	43. 0							
21. 59	44. 50							
22. 4	44. 20							
22. 39	48. 35							
22. 53	49. 50							
23. 1	49. 55							
23. 6	49. 35							
23. 15	50. 0							
	(†)							
Apr. 22		Apr. 22		Apr. 22		Apr. 22		
	(†)		(†)	0. 0	·01940	0. 0	55 ·0	54 ·8
0. 40	20. 53. 40	0. 42	·1097	1. 56	·01963	1. 0	55 ·5	55 ·2
0. 56	54. 55	1. 0	·1100	3. 45	·01920	3. 0	57 ·6	56 ·8
1. 19	54. 0	1. 25	·1095	4. 55	·01840	6. 0	59 ·4	57 ·0
1. 39	55. 55	1. 35	·1099	6. 0	·01797	9. 0	59 ·0	56 ·4
1. 53	53. 40		(†)	8. 57	·01692	12. 0	57 ·0	56 ·0
1. 57	53. 55	2. 15	·1104	10. 18	·01683	18. 0	51 ·8	51 ·0
2. 11	52. 0	2. 57	·1103	13. 8	·01770	21. 0	50 ·0	50 ·0
2. 24	52. 30	3. 14	·1107	18. 35	·02000	22. 0	50 ·5	50 ·5
2. 43	51. 25	3. 34	·1106	21. 33	·01940	23. 0	51 ·0	51 ·0
4. 12	48. 55	3. 49	·1108	23. 15	·01960			
4. 30	49. 5	3. 59	·1107	23. 59	·01948			
5. 14	47. 0	4. 36	·1117					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 22		Apr. 22						
h m	° ′ ″	h m		h m		h m	°	°
6. 13	20. 43. 0	4. 51	·1118					
6. 34	45. 0	5. 0	·1116					
7. 2	45. 50	5. 16	·1118					
7. 34	47. 25		(†)					
8. 8	46. 25	8. 51	·1114					
	(†)	9. 10	·1114					
8. 53	46. 25	9. 18	·1118					
9. 23	45. 15	9. 32	·1115					
9. 48	38. 45	9. 47	·1122					
9. 56	39. 45	10. 15	·1108					
10. 25	39. 0	10. 29	·1114					
10. 41	42. 0	11. 0	·1101					
11. 28	39. 55	11. 36	·1102					
12. 8	40. 40	12. 11	·1098					
12. 26	44. 0	12. 46	·1107					
13. 16	44. 5	13. 4	·1104					
14. 0	41. 0	13. 23	·1108					
14. 37	44. 55	13. 36	·1107					
15. 26	46. 45	13. 48	·1110					
15. 53	45. 0	14. 43	·1109					
16. 15	44. 50	15. 4	·1113					
16. 38	43. 5	15. 25	·1117					
16. 58	43. 10	15. 39	·1114					
17. 9	44. 35		(†)					
		21. 0	·1093*					
18. 16	43. 50	21. 20	·1097					
18. 32	42. 25	22. 22	·1095					
19. 2	43. 30	22. 48	·1100					
19. 27	41. 50	23. 8	·1098					
19. 38	42. 45	23. 29	·1104					
19. 49	42. 0	23. 43	·1115					
20. 1	42. 40	23. 53	·1112					
20. 25	40. 40		(†)					
20. 46	43. 15							
21. 22	44. 25							
21. 31	45. 35							
22. 38	47. 35							
23. 9	49. 35							
23. 43	50. 20							
23. 59	52. 25							
Apr. 23		Apr. 23		Apr. 23		Apr. 23		
0. 0	20. 52. 25		(†)	0. 0	·01948	0. 0	51 ·0	51 ·5
0. 13	51. 35	0. 12	·1110	1. 40	·01977	1. 0	53 ·0	52 ·0
0. 36	54. 15	0. 37	·1117	3. 7	·01940	2. 0	54 ·2	53 ·0
0. 43	53. 30	0. 53	·1110	4. 12	·01845	3. 0	55 ·8	54 ·3
1. 26	53. 45	1. 7	·1115	6. 12	·01680	9. 0	56 ·2	54 ·0
1. 37	53. 0	1. 38	·1123	9. 0	·01640	21. 0	48 ·2	49 ·0
2. 30	50. 5	2. 29	·1124	10. 18	·01647			
2. 44	50. 20	2. 50	·1129	10. 39	·01660			
3. 2	49. 5	3. 13	·1129	11. 15	·01650			
3. 18	49. 0	3. 20	·1132	15. 10	·01760			
3. 38	48. 5	3. 38	·1130	15. 33	·01760			
3. 55	48. 10	4. 4	·1135	17. 22	·01840			
4. 55	46. 55			18. 5	·01860			
7. 37	47. 5	5. 14	·1132	18. 35	·01900			
8. 40	46. 20	6. 7	·1135	20. 15	·01930			
9. 23	47. 5	6. 35	·1142	20. 23	·01937			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 23		Apr. 23		Apr. 23				
h m	° ′ ″	h m		h m		h m	°	°
10. 23	20. 44. 55	7. 20	·1130	21. 19	·01907			
10. 52	47. 15	8. 56	·1129	23. 59	·01923			
11. 30	40. 0	9. 25	·1133					
11. 49	41. 45	10. 23	·1127					
12. 3	42. 0	10. 46	·1138					
12. 28	44. 30	11. 31	·1128					
12. 55	43. 10	11. 58	·1127					
13. 18	43. 50	12. 14	·1122					
13. 45	41. 35	12. 32	·1127					
14. 29	43. 35	13. 6	·1125					
14. 42	42. 0	13. 30	·1128					
15. 13	44. 10	13. 58	·1126					
15. 32	39. 50	14. 18	·1128					
15. 58	38. 35	14. 39	·1128					
16. 20	40. 35	14. 58	·1120					
16. 37	43. 0	15. 18	·1132					
17. 10	42. 30	15. 38	·1131					
17. 22	43. 45	15. 59	·1121					
17. 35	42. 40	16. 53	·1114					
17. 54	44. 40	17. 20	·1117					
18. 53	41. 15	17. 32	·1115					
19. 2	41. 50	17. 46	·1118					
19. 16	40. 20	18. 8	·1115					
19. 52	40. 15	19. 55	·1107					
20. 0	41. 30	20. 9	·1103					
20. 20	41. 10	20. 58	·1098					
20. 59	45. 0	21. 17	·1094					
21. 20	45. 55	21. 32	·1098					
21. 56	49. 0	22. 18	·1096					
22. 8	48. 55	22. 35	·1101					
22. 22	50. 5	23. 23	·1106					
23. 20	51. 40	23. 42	·1112					
23. 40	53. 0	23. 53	·1111					
23. 53	52. 5	23. 59	·1115					
23. 59	53. 0							
Apr. 24		Apr. 24		Apr. 24		Apr. 24		
0. 0	20. 53. 0	0. 0	·1115	0. 0	·01923	1. 0	52 ·3	51 ·8
0. 10	52. 0	0. 8	·1113	1. 11	·01920	3. 0	56 ·0	55 ·5
0. 54	52. 5	0. 38	·1121		·01930	9. 0	54 ·3	57 ·1
1. 5	51. 35	1. 9	·1123	2. 25	·01965	21. 0	53 ·3	52 ·8
1. 37	53. 45	1. 47	·1136	3. 11	·01880			
1. 58	52. 40	2. 29	·1137	3. 42	·01823			
3. 7	52. 25	2. 56	·1141	4. 34	·01695			
3. 53	48. 25	3. 6	·1139	6. 10	·01580			
4. 24	49. 0	3. 31	·1145	6. 38	·01570			
6. 0	46. 25	3. 55	·1139	7. 41	·01500			
6. 7	46. 40	4. 7	·1142	11. 8	·01463			
6. 27	43. 35	4. 22	·1141	11. 33	·01443			
6. 49	44. 5	4. 44	·1146	14. 40	·01508			
8. 0	47. 40	4. 52	·1145	17. 10	·01600			
8. 33	46. 10	5. 52	·1151		(†)			
9. 5	46. 50	6. 10	·1147	21. 0	·01716*			
9. 30	43. 0	6. 24	·1137	22. 36	·01780			
9. 49	35. 0	6. 53	·1143	23. 22	·01787			
9. 53	37. 25	7. 15	·1140	23. 52	·01780			
9. 55	40. 0	7. 51	·1138		(†)			
10. 13	42. 10	8. 14	·1141					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 24		Apr. 24						
h m	° ′ ″	h m		h m		h m	°	°
10. 15	20. 44. 0	8. 43	·1130					
10. 52	42. 35	9. 15	·1128					
11. 3	45. 20	9. 36	·1116					
11. 16	43. 35	9. 55	·1125					
11. 34	39. 10	10. 16	·1116					
11. 46	38. 40	10. 28	·1106					
12. 8	42. 15	10. 39	·1110					
12. 36	43. 0	10. 52	·1108					
13. 14	45. 0	11. 10	·1107					
14. 14	45. 0		(†)					
14. 45	42. 50	21. 0	·1091*					
15. 4	42. 55	22. 39	·1100					
15. 42	45. 35	23. 4	·1100					
16. 16	43. 45	23. 23	·1103					
16. 44	44 0	23. 38	·1100					
17. 1	43. 30	23. 53	·1101					
17. 28	44. 0		(†)					
18. 0	43. 55							
18. 14	41. 55							
18. 40	41. 35							
	(†)							
21. 0	45. 32*							
22. 37	49. 10							
23. 25	51. 25							
23. 47	51. 5							
23. 55	51. 35							
	(†)							
Apr. 25		Apr. 25		Apr. 25		Apr. 25		
	(†)		(†)		(†)	1. 0	55 ·7	55 ·8
0. 6	20. 51. 0	0. 12	·1098	0. 9	·01767	3. 0	58 ·1	58 ·7
0. 23	51. 20	0. 37	·1097	2. 6	·01800	9. 0	62 ·2	60 ·8
0. 36	50. 55	1. 30	·1101	3. 2	·01700	22. 0	54 ·0	53 ·5
1. 27	51. 0	1. 53	·1109	4. 3	·01640			
1. 50	51. 55	2. 4	·1117	4. 20	·01595			
2. 8	50. 35	2. 10	·1116	5. 28	·01570			
2. 31	49. 50	2. 23	·1120	6. 9	·01590			
3. 6	49. 35	3. 10	·1123	9. 3	·01530			
3. 51	48. 15	3. 19	·1125	9. 26	·01497			
4. 19	49. 0	3. 29	·1122	9. 44	·01498			
5. 12	47. 40	3. 38	·1127	10. 24	·01468			
5. 37	44. 0	3. 50	·1124	12. 40	·01500			
5. 53	42. 35	4. 20	·1130	14. 8	·01560			
6. 54	44. 0	4. 57	·1127	20. 10	·01900			
7. 15	46. 0	5. 11	·1128	23. 59	·02000			
7. 58	44. 55	5 33	·1115					
8. 21	44. 45	6. 16	·1136					
8. 38	45. 10	7. 12	·1127					
8. 55	42. 0	7. 23	·1130					
9. 3	38. 0	7. 44	·1130					
9. 19	42. 0	8. 29	·1119					
9. 41	33. 25	8. 53	·1120					
9. 59	39. 30	9. 7	·1138					
10. 9	38. 20	9. 31	·1117					
10. 25	40. 35	9. 49	·1130					
10. 34	40. 40	10. 7	·1116					
10. 57	44. 25	10. 14	·1114					
12. 1	45. 0	10. 31	·1102					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Apr. 25	
h m	° ′ ″
12. 23	20. 41. 15
12. 57	37. 10
13. 12	36. 30
13. 30	37. 55
14. 0	38. 0
14. 52	44. 5
15. 18	37. 30
15. 45	37. 55
16. 25	37. 25
16. 50	40. 0
17. 3	40. 35
17. 30	38. 25
18. 34	38. 20
	(†)
20. 0	42. 5
20. 13	41. 10
21. 19	45. 30
22. 7	50. 0
22. 13	49. 40
22. 38	51. 45
22. 54	50. 55
22. 58	51. 35
23. 1	50. 20
23. 10	50. 0
23. 18	50. 30
23. 54	51. 0
23. 59	50. 30
Apr. 26	
0. 0	20. 50. 30
0. 37	52. 25
0. 56	51. 35
1. 28	53. 30
2. 0	52. 10
2. 28	53. 0
3. 9	51. 5
3. 24	49. 30
3. 51	47. 50
4. 12	47. 20
4. 23	48. 10
4. 50	46. 55
5. 9	47. 50
5. 32	43. 45
5. 45	44. 5
5. 52	44. 50
6. 17	44. 5
6. 36	44. 50
6. 49	45. 55
7. 27	43. 25
7. 53	43. 40
8. 13	42. 35
8. 28	41. 0
8. 42	41. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 25	
h m	
11. 41	·1110
11. 53	·1114
12. 10	·1112
12. 25	·1116
12. 45	·1114
12. 53	·1116
13. 14	·1108
13. 29	·1111
14. 23	·1104
14. 51	·1110
15. 8	·1106
15. 59	·1113
16. 16	·1109
16. 29	·1113
17. 11	·1114
17. 30	·1112
17. 50	·1112
18. 29	·1104
19. 0	·1104
19. 8	·1106
19. 21	·1104
19. 38	·1107
19. 58	·1104
21. 25	·1096
22. 6	·1098
22. 23	·1100
22. 27	·1102
22. 44	·1101
22. 52	·1106
23. 2	·1107
23. 4	·1104
23. 59	·1112
Apr. 26	
0. 0	·1112
0. 7	·1111
0. 39	·1116
0. 54	·1112
1. 33	·1119
1. 58	·1116
2. 36	·1127
2. 58	·1121
3. 13	·1120
3. 24	·1114
4. 13	·1114
4. 35	·1121
4. 52	·1118
5. 15	·1130
5. 32	·1125
5. 46	·1134
6. 0	·1134
6. 16	·1128
6. 30	·1129
7. 24	·1117
7. 39	·1120
7. 55	·1119
8. 7	·1121
8. 19	·1119

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 26	
0. 0	·02000
2. 0	·01942
3. 30:	·01952
5. 39	·01867
9. 20	·01587
11. 16	·01567
12. 37	·01590
13. 7:	·01537
19. 19	·01950
23. 59	·02075

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 26		
9. 0	62 ·0	61 ·0
21. 0	54 ·0	53 ·2

Greenwich Mean Solar Time.	Western Declination.
Apr. 26	
h m	° ′ ″
8. 45	20. 41. 0
9. 4	35. 55
9. 12	38. 35
9. 25	37. 40
9. 34	38. 35
9. 39	38. 5
9. 45	38. 30
9. 53	40. 0
10. 1	39. 30
10. 33	42. 50
10. 47	42. 55
10. 57	43. 45
11. 11	43. 0
11. 35	43. 20
12. 5	40. 40
12. 27	49. 55
13. 2	38. 45
13. 28	37. 5
13. 53	39. 10
	(†)
17. 37	43. 10
18. 15	43. 5
19. 21	44. 15
20. 34	43. 55
21. 26	44. 45
22. 32	48. 0
23. 16	49. 5
23. 29	50. 40
23. 59	52. 25
Apr. 27	
0. 0	20. 52. 25
0. 55	53. 25
1. 37	51. 15
2. 15	50. 30
3. 2	48. 45
4. 23	48. 45
5. 48	47. 0
6. 45	46. 25
7. 30	47. 0
8. 13	45. 40
9. 6	46. 25
9. 14	45. 30
9. 43	45. 40
9. 57	44. 50
10. 28	46. 10
10. 56	44. 35
11. 1	43. 15
11. 23	42. 10
11. 39	42. 25
12. 21	45. 20
12. 54	39. 35
13. 39	40. 30
14. 49	43. 40
16. 30	43. 0
17. 12	43. 25
17. 30	42. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 26	
h m	
8. 27	·1120
9. 15	·1107
9. 23	·1107
9. 35	·1102
9. 48	·1102
9. 55	·1099
10. 12	·1103
10. 22	·1102
10. 49	·1110
11. 7	·1108
11. 22	·1109
12. 23	·1104
12. 43	·1131
12. 51	·1126
13. 6	·1123
13. 21	·1112
13. 30	·1111
13. 45	·1112
13. 53	·1110
	(†)
17. 36	·1117
19. 13	·1117
19. 57	·1114
21. 26	·1105
22. 52	·1103
23. 15	·1106
23. 34	·1112
23. 45	·1112
23. 59	·1116
Apr. 27	
0. 0	·1116
0. 17	·1114
0. 53	·1118
1. 39	·1118
2. 13	·1123
2. 38	·1123
3. 7	·1126
3. 20	·1125
3. 35	·1126
3. 43	·1125
4. 27	·1130
4. 40	·1128
4. 52	·1129
5. 8	·1127
6. 29	·1128
6. 37	·1126
7. 13	·1124
7. 25	·1121
7. 57	·1118
8. 17	·1119
8. 43	·1116
9. 7	·1109
10. 1	·1109
10. 14	·1112
10. 50	·1112
11. 0	·1110

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr. 27	
0. 0	·02075
1. 37	·02015
2. 17	·01875
3. 3	·01844
4. 56:	·01605
6. 9	·01580
7. 53	·01540
9. 40	·01560
10. 8	·01550
12. 34	·01595
13. 59	·01640
17. 10	·01850
19. 3	·01920
22. 15	·02000
23. 59	·01980

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 27		
1. 0	59 ·0	59 ·0
3. 0	61 ·3	61 ·4
9. 0	64 ·0	61 ·8
21. 0	55 ·3	54 ·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 26. The Declination and Horizontal Force photographic cylinder was stopped from 13h. 53m. to 17h. 30m.

Greenwich Mean Solar Time.	Western Declination.
Apr.27	
h m	° ′ ″
17. 40	20. 43. 0
17. 54	41. 35
18. 21	42. 5
19. 3	40. 10
19. 22	41. 5
20. 0	41. 30
20. 32	42. 55
20. 57	45. 5
21. 0	44. 10
21. 43	47. 20
22. 37	48. 55
23. 12	50. 55
23. 59	51. 25
Apr.28	
0. 0	20. 51. 25
0. 51	52. 35
1. 43	51. 30
2. 37	49. 30
3. 20	48. 45
3. 46	49. 0
4. 43	47. 0
5. 26	46. 25
5. 33	46. 40
7. 0	45. 55
9. 56	45. 5
10. 46	44. 15
11. 30	44. 0
11. 34	43. 10
12. 15	43. 0
12. 32	40. 55
12. 58	40. 20
13. 23	43. 40
13. 41	44. 5
14. 9	41. 10
15. 1	41. 45
15. 32	43. 30
19. 18	41. 20
20. 52	42. 50
22. 48	49. 30
23. 16	52. 5
23. 30	52. 0
23. 59	53. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr.27	
h m	
11. 52	·1109
12. 17	·1116
12. 35	·1115
13. 4	·1125
14. 5	·1114
14. 30	·1118
14. 52	·1117
15. 25	·1117
16. 38	·1114
17. 14	·1114
17. 30	·1112
17. 39	·1113
17. 55	·1111
18. 51	·1107
19. 24	·1107
20. 17	·1102
20. 50	·1102
21. 16	·1098
	***
23. 2	1107
23. 46	·1116
23. 59	·1119
Apr.28	
0. 0	·1119
0. 26	·1125
0. 53	·1125
1. 31	·1123
2. 14	·1129
2. 28	·1128
2. 47	·1129
3. 11	·1133
3. 21	·1133
3. 39	·1136
4. 1	·1136
4. 27	·1139
4. 46	·1137
5. 1	·1146
5. 27	·1132
5. 40	·1139
6. 25	·1136
6. 38	·1141
7. 2	·1143
7. 38	·1138
8. 19	·1134
8. 38	·1134
8. 45	·1135
9. 37	·1133
9. 47	·1135
9. 55	·1132
10. 3	·1134
10. 42	·1131
11. 20	·1132
11. 28	·1130
11. 54	·1132
12. 11	·1140
12. 21	·1135
12. 47	·1130

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr.28	
0. 0	·01980
3. 2	·02044
6. 54	·01917
9. 44	·01920
13. 8	·02026
14. 3	·01998
16. 30	·01973
21. 3	·01885
	·01740
23. 59	·01760

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr.28		
1. 0	56 ·0	54 ·7
3. 0	57 ·0	56 ·0
9. 0	57 ·7	55 ·7
21. 0	50 ·0	50 ·8
22. 0	50 ·0	50 ·8
23. 0	50 ·2	50 ·8

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
Apr.29	
0. 0	20. 53. 15
0. 30	53. 55
1. 30	54. 10
1. 53	53. 40
2. 23	54. 5
2. 55	53. 0
5. 55	49. 20
6. 2	50. 0
6. 12	49. 35
7. 16	49. 40
7. 35	48. 30
8. 11	49. 5
9. 23	46. 25
9. 30	44. 55
9. 42	46. 25
9. 57	43. 35
10. 8	42. 35
10. 13	43. 25
10. 21	42. 20
10. 29	43. 15
10. 55	42. 35
11. 3	44. 0
11. 21	45. 0
11. 46	45. 0
11. 58	46. 25
12. 5	45. 0
12. 24	43. 45
12. 50	45. 15
13. 6	43. 5
13. 9	44. 0
13. 53	42. 10
14. 16	42. 0
14. 20	41. 5
14. 52	46. 15
15. 32	45. 20
15. 47	46. 20
16. 5	45. 40
16. 24	48. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr.28	
h m	
13. 10	·1135
13. 22	·1134
13. 35	·1135
14. 16	·1129
14. 37	·1128
14. 58	·1130
15. 30	·1128
18. 21	·1129
20. 7	·1116
21. 14	·1113
21. 23	·1112
21. 38	·1110
22. 15	·1109
22. 50	·1111
22. 57	·1110
23. 11	·1114
23. 30	·1114
23. 59	·1119
Apr.29	
0. 0	·1119
0. 13	·1120
0. 55	·1120
2. 23	·1139
3. 49	·1135
3. 43	·1142
4. 30	·1142
4. 43	·1139
6. 3	·1143
6. 12	·1152
6. 20	·1144
6. 30	·1151
7. 1	·1147
7. 59	·1148
8. 8	·1144
8. 15	·1151
8. 50	·1152
9. 8	·1138
9. 30	·1144
9. 38	·1160
10. 1	·1136
10. 16	·1137
10. 23	·1127
10. 30	·1138
10. 38	·1141
10. 45	·1129
10. 52	·1134
11. 0	·1131
11. 8	·1137
11. 13	·1136
11. 20	·1140
11. 28	·1136
11. 38	·1141
11. 57	·1137
12. 8	·1148
12. 28	·1138
12. 49	·1137
13. 7	·1150

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Apr.29	
0. 0	·01760
3. 0	·01770
5. 3	·01680
6. 57	·01650
9. 49	·01680
10. 56	·01720
9. 0	·01740
12. 3	·01820
13. 5	·01790
16. 46	·01740
17. 26	·01760
17. 48	·01720
18. 18	·01740
19. 13	·01720
19. 39	·01730
20. 19	·01705
20. 50	·01720
21. 19	·01695
21. 43	·01730
22. 8	·01720
22. 52	·01745
23. 59	·01755

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr.29		
0. 0	51 ·0	51 ·0
1. 0	51 ·5	51 ·3
2. 0	52 ·5	52 ·1
3. 0	53 ·5	52 ·9
6. 0	55 ·3	53 ·2
9. 0	54 ·1	52 ·5
12. 0	53 ·0	52 ·0
18. 0	48 ·1	48 ·2
21. 0	47 ·3	48 ·4
22. 0	47 ·8	48 ·7
23. 0	48 ·5	49 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 29		Apr. 29						
h m	° ′ ″	h m		h m		h m	°	°
16. 37	20. 52. 20	13. 14	·1139					
16. 52	52. 40	13. 22	·1151					
17. 18	51. 50	13. 43	·1145					
17. 29	48. 10	13. 49	·1149					
17. 35	53. 5	14. 3	·1145					
17. 39	52. 50	14. 19	·1146					
17. 45	55. 30	14. 27	·1137					
17. 56	53. 50	14. 33	·1144					
18. 0	55. 0	14. 36	·1136					
18. 21	48. 40	14. 44	·1142					
18. 35	51. 0	15. 38	·1143					
18. 42	50. 10	16. 6	·1143					
18. 51	51. 5	16. 17	·1144					
18. 59	49. 30	16. 31	·1140					
19. 2	50. 20	16. 52	·1144					
19. 16	45. 10	17. 1	·1144					
19. 46	55. 30	17. 14	·1137					
19. 57	53. 15	17. 30	·1133					
20. 0	55. 40	17. 37	·1136					
20. 16	53. 50	17. 45	·1137					
20. 24	56. 45	18. 15	·1166					
20. 31	55. 40	18. 40	·1150					
20. 35	57. 15	18. 50	·1148					
21. 17	20. 54. 0	19. 15	·1118					
21. 39	21. 2. 0	19. 41	·1137					
21. 57	20. 58. 5	20. 0	·1117					
22. 0	55. 25	20. 7	·1121					
22. 13	57. 55	20. 15	·1121					
22. 18	56. 40	20. 27	·1132					
22. 22	58. 35	20. 38	·1133					
22. 45	58. 20	21. 7	·1122					
22. 57	59. 25	21. 17	·1108					
23. 14	56. 50	21. 29	·1108					
23. 19	57. 35	21. 41	·1116					
23. 29	55. 5		***					
23. 37	56. 50	22. 2	·1108					
23. 55	54. 25	22. 16	·1112					
23. 59	54. 20		***					
		22. 45	·1111					
			***					
		23. 20	·1115					
		23. 28	·1112					
		23. 47	·1127					
		23. 51	·1125					
		23. 59	·1125					
Apr. 30		Apr. 30		Apr. 30		Apr. 30		
0. 0	20. 54. 20	0. 0	·1125	0. 0	·01755	0. 0	49·8	49·9
0. 7	54. 40	0. 25	·1126	2. 35	·01747	1. 0	51·2	51·0
0. 14	53. 45	0. 36	·1129	4. 5	·01663	3. 0	54·2	53·2
0. 16	54. 0	0. 43	·1128	4. 11	·01660	9. 0	54·4	53·0
0. 38	53. 35	0. 50	·1126	4. 47	·01607	21. 0	45·8	46·8
	(†)	1. 0	·1128	5. 58	·01566			
1. 0	53. 49*	1. 23	·1111	9. 47	·01530			
3. 0	50. 25*	1. 39	·1129	12. 24	·01580			
9. 0	35. 24*	1. 44	·1134	12. 54	·01580			
21. 0	46. 8*	1. 53	·1128	17. 15	·01775			
			(†)	17. 42	·01780			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Apr. 30 h m		Apr. 30 h m		h m	°	°
		2. 26	·1130	18. 15	·01758			
		2. 47	·1140	18. 46	·01750			
		2. 57	·1131		·01690			
		3. 4	·1132	20. 11	·01697			
		3. 13	·1120	21. 0	·01726			
		3. 28	·1112	23. 59	·01724			
		3. 45	·1127					
		4. 1	·1115					
		4. 17	·1125					
		4. 27	·1118					
		4. 51	·1124					
		4. 59	·1122					
		5. 22	·1132					
		5. 30	·1131					
		5. 44	·1134					
		6. 0	·1133					
		6. 15	·1135					
		6. 25	·1132					
		6. 42	·1142					
		6. 50	·1137					
		7. 1	·1135					
		7. 23	·1136					
		7. 38	·1129					
		7. 49	·1131					
		8. 1	·1128					
		8. 17	·1132					
		8. 26	·1130					
		8. 36	·1131					
		8. 46	·1127					
		9. 14	·1147					
		9. 29	·1131					
		9. 36	·1133					
		9. 54	·1128					
		10. 15	·1130					
		10. 21	·1127					
		11. 41	·1130					
		11. 47	·1128					
		12. 8	·1131					
		12. 22	·1136					
		12. 34	·1137					
		13. 0	·1127					
		13. 16	·1131					
		13. 29	·1131					
		14. 1	·1126					
			***					
		16. 32	·1133					
		17. 27	·1131					
		17. 45	·1133					
		18. 23	·1129					
		18. 37	·1133					
		18. 44	·1131					
		19. 23	·1128					
		20. 7	·1115					
		20. 13	·1111					
		20. 32	·1107					
		20. 41	·1103					
		20. 57	·1116					
		21. 26	·1122					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

April 30. After 0h. 38m. the photographic trace for the Declination Magnet was too faint for use.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Apr. 30 h m		h m		h m	°	°
		21. 31	·1120					
		21. 45	·1121					
		21. 57	·1125					
		22. 15	·1117					
		22. 50	·1107					
		23. 23	·1118					
		23. 46	·1101					
		23. 59	·1106					
May 1		May 1		May 1		May 1 .		
	(†)	0. 0	·1106	0. 0	·01724	1. 0	·51 ·1	51 ·0
0. 19	20. 53. 30	0. 11	·1112	0. 36	·01736	3. 0	54 ·6	54 ·0
0. 30	53. 10	0. 23	·1112	1. 23	·01710	9. 0	58 ·8	56 ·8
0. 36	55. 40	0. 37	·1117	2. 25:	·01700	21. 0	48 ·1	48 ·4
0. 51	56. 50	0. 40	·1127	4. 53	·01480			
1. 22	55. 0	0. 55	·1134	10. 19	·01405			
1. 38	56. 20	1. 4	·1134	11. 19	·01430			
2. 28	52. 55	1. 23	·1123	19. 32	·01860			
2. 46	54. 35	1. 42	·1138	21. 19	·01800			
2. 58	54. 0	1. 56	·1132	23. 59	·01840			
3. 16	54. 50	2. 7	·1139					
3. 36	50. 40	2. 10	·1137					
3. 52	49. 35	2. 50	·1142					
4. 13	52. 10	2. 56	·1136					
4. 25	52. 5	3. 16	·1149					
4. 43	48. 40	3. 33	·1129					
5. 28	47. 10	3. 43	·1132					
6. 58	46. 35	3. 53	·1131					
8. 29	46. 40	4. 20	·1134					
8. 50	45. 20	4. 30	·1129					
9. 8	46. 45		***					
9. 18	45. 20	5. 34	·1141					
10. 16	44. 55	5. 52	·1141					
10. 24	45. 25	6. 15	·1140					
10. 53	45. 5	6. 50	·1142					
11. 5	44. 25	6. 58	·1138					
12. 3	45. 0	8. 8	·1131					
	***	8. 45	·1130					
13. 14	45. 10	8. 59	·1132					
	***	9. 12	·1129					
13. 56	47. 0		***					
14. 24	45. 40	10. 21	·1132					
	***	10. 27	·1134					
15. 12	46. 5	10. 39	·1132					
15. 45	43. 10		***					
15. 58	44. 30	13. 8	·1131					
17. 5	41. 40	13. 27	·1133					
17. 23	43. 15	13. 35	·1132					
17. 29	42. 40	13. 58	·1134					
18. 0	43. 0	14. 23	·1132					
18. 9	41. 40	14. 49	·1135					
18. 24	42. 0	15. 8	·1132					
18. 35	44. 15	15. 18	·1134					
18. 45	44. 30	15. 36	·1132					
18. 54	43. 20	15. 54	·1136					
19. 33	42. 0	16. 30	·1130					
19. 42	43. 0		***					
19. 59	42. 5	17. 29	·1127					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 1 h m	° ′ ″	May 1 h m		h m		h m	°	°
20. 14	20. 44. 40	17. 38	·1131					
21. 30	45. 35	17. 45	·1130					
21. 43	47. 10	18. 29:	·1128					
21. 53	46. 35	18. 56	·1132					
22. 13	48. 0	19. 13	·1129					
22. 52	48. 20	19. 24	·1131					
23. 0	49. 5	19. 45	·1122					
23. 59	50. 0	20. 10	·1118					
		20. 43	·1120					
		20. 53	·1123					
		21. 6	·1118					
		21. 18	·1120					
		22. 7	·1117					
		22. 16	·1120					
		22. 30	·1117					
		22. 53	·1125					
			(†)					
		23. 59	·1126					
May 2		May 2		May 2		May 2		
0. 0	20. 50. 0	0. 0	·1126	0. 0	·01840	1. 0	53 ·2	53 ·0
0. 58	51. 40	0. 5	·1129	1. 25	·01817	3. 0	56 ·2	56 ·0
1. 27	50. 55	0. 30	·1134	3. 33	·01640	9. 9	60 ·7	58 ·3
1. 41	51. 25	0. 42	·1141	5. 6:	·01460	22. 7	53 ·0	53 ·0
1. 53	50. 30	0. 56	·1138	7. 55	·01505			
2. 20	50. 20	1. 4	·1142	8. 18	·01487			
2. 39	49. 25	1. 25	·1140	10. 8	·01440			
3. 54	47. 55	1. 45	·1143	10. 29	·01420			
5. 3	47. 20	2. 0	·1140	11. 35	·01427			
5. 51	45. 5	2. 22	·1148	13. 45	·01494			
6. 52	45. 10	2. 37	·1146	19. 19	·01820			
7. 16	42. 50	3. 3	·1150	20. 12	·01840			
7. 35	42. 40	3. 29	·1141	23. 46	·01895			
7. 45	39. 40	3. 46	·1142	23. 59	·01890			
8. 2	39. 35	4. 8	·1144					
8. 8	41. 10	4. 23	·1143					
8. 17	40. 5	4. 30	·1148					
8. 28	40. 25		***					
8. 37	42. 0	5. 30	·1148					
8. 56	42. 0	5. 45	·1150					
9. 6	44. 55	6. 23	·1152					
9. 27	44. 55	6. 38	·1157					
9. 30	42. 30	6. 52	·1159					
9. 39	41. 55	7. 13	·1154					
10. 0	35. 10	7. 35:	·1134					
10. 7	38. 30	8. 3	·1140					
10. 22	39. 30	8. 24	·1130					
10. 32	37. 55	8. 38	·1131					
10. 48	39. 0	8. 53	·1126					
10. 54	42. 40	9. 8	·1133					
11. 10	43. 0	9. 13	·1131					
11. 33	41. 5	9. 22	·1132					
11. 59	43. 0	9. 29	·1133					
12. 15	40. 5	9. 37	·1137					
12. 42	41. 40	9. 41	·1134					
	(†)	9. 48	·1136					
16. 54	42. 50	10. 29	·1125					
17. 31	45. 5	10. 43	·1129					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 2. The Declination and Horizontal-Force cylinder was stopped from $12^h.\ 46^m.$ till after $16^h.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
May 2		May 2						
h m	° ′ ″	h m		h m		h m	°	°
17. 46	20. 43. 40	10. 51	·1128					
18. 3	44. 30	11. 0	·1129					
18. 17	42. 35	11. 13	·1125					
18. 23	43. 5	11. 37	·1134					
18. 31	41. 10	12. 16	·1132					
18. 37	43. 0	12. 24	·1134					
18. 47	42. 5	12. 46	·1137					
18. 52	41. 5		(†)					
18. 58	41. 35	16. 39	·1123					
19. 25	41. 5	17. 12	·1123					
19. 40	40. 10	17. 27	·1118					
20. 21	41. 40	17. 49	·1116					
20. 55	41. 40		***					
21. 46	44. 5	18. 32	·1119					
22. 8	44. 0	18. 39	·1122					
23. 0	48. 0	19. 39	·1118					
23. 3	48. 55	20. 1	·1120					
23. 29	48. 35	20. 59	·1110					
23. 59	49. 0	22. 13	·1106					
		22. 37	·1109					
		22. 52	·1106					
		23. 7	·1109					
		23. 9	·1112					
		23. 35	·1108					
		23. 59	·1115					
May 3		May 3		May 3		May 3		
0. 0	20. 49. 0	0. 0	·1115	0. 0	·01890	9. 0	65 ·9	63 ·7
0. 30	49. 35	0. 21	·1121	1. 40	·01827	21. 0	59 ·0	58 ·0
0. 38	50. 45	0. 28	·1121	4. 33	·01558			
1. 40	51. 40	0. 43	·1126	6. 42	·01575			
2. 59	48. 45	0. 56	·1127	10. 13	·01485			
3. 7	48. 45	1. 40	·1134	12. 14	·01520			
3. 29	47. 35	1. 49	·1132	18. 56	·01840			
3. 44	47. 35	2. 22	·1135	20. 48	·01880			
5. 29	45. 20	2. 49	·1130	23. 11	·01913			
6. 33	43. 5	4. 21	·1137	23. 59	·01900			
7. 6	44. 10	5. 19	·1134					
9. 37	45. 20	6. 13	·1134					
10. 16	44. 45	6. 42	·1137					
12. 15	45. 55	7. 55	·1133					
13. 53	45. 25	8. 6	·1133					
15. 5	47. 5	9. 9	·1127					
15. 31	45. 25	9. 23	·1125					
16. 28	45. 10	14. 5	·1129					
17. 0	44. 0	14. 47	·1129					
17. 32	44. 0	15. 10	·1133					
18. 22	42. 20	15. 43	·1131					
18. 33	42. 40	17. 19	·1132					
18. 49	42. 10	18. 23	·1130					
19. 0	43. 0	19. 19	·1122					
19. 27	43. 5	19. 29	·1122					
19. 49	42. 30	20. 12	·1116					
20. 22	42. 25	20. 19	·1116					
20. 58	43. 55	20. 31	·1112					
21. 31	42. 5	20. 53	·1113					
23. 55	50. 55	21. 16	·1108					
23. 59	51. 0	21. 29	·1109					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
May 3		May 3						
h m	° ′ ″	h m		h m		h m	°	°
		21. 48	·1107					
		22. 30	·1111					
		22. 53	·1108					
		23. 59	·1113					
May 4		May 4		May 4		May 4		
0. 0	20. 51. 0	0. 0	·1113	0. 0	·01900	1. 0	60 ·0	61 ·0
1. 7	51. 30	0. 23	·1112	0. 39	·01880	3. 0	61 ·6	62 ·0
1. 52	49. 35	1. 28	·1120	1. 4	·01865	9. 0	64 ·6	63 ·0
2. 1	50. 5	1. 46	·1120	3. 8	·01837	21. 0	58 ·1	57 ·5
2. 25	49. 5	2. 0	·1128	4. 13	·01767			
2. 40	49. 30	2. 13	·1130	6. 17	·01747			
4. 11	46. 35	2. 38	·1133	8. 11	·01680			
4. 31	46. 20	2. 53	·1129	9. 17	·01667			
4. 44	45. 0	3. 22	·1130		·01680			
5. 41	44. 30	3. 36	·1128	10. 6	·01680			
6. 3	43. 35	4. 7	·1129	11. 15	·01653			
6. 42	44. 20	4. 27	·1131	12. 23	·01683			
7. 14	43. 35	4. 44	·1129	17. 48	·02000			
10. 1	45. 25	5. 27	·1128	21. 0	·01920			
10. 42	44. 50	5. 38	·1130		·01890			
12. 5	45. 25	6. 1	·1131	23. 0	·01910			
12. 28	44. 40	6. 14	·1132	23. 26	·01900			
13. 22	44. 0	6. 24	·1131	23. 59	·01910			
13. 50	44. 40	7. 50	·1129					
14. 38	44. 25	8. 17	·1127					
15. 13	45. 0	8. 43	·1127					
15. 38	44. 10	9. 23	·1123					
17. 7	43. 0	10. 36	·1122					
17. 41	41. 35	11. 53	·1124					
18. 8	41. 30	12. 33	·1126					
18. 14	40. 30	13. 4	·1125					
18. 17	41. 50	13. 20	·1126					
18. 29	40. 50	14. 53	·1124					
18. 48	41. 0	15. 0	·1127					
19. 0	39. 30	15. 55	·1125					
19. 10	41. 0	16. 58	·1126					
19. 42	40. 10	17. 30	·1125					
19. 50	42. 10	18. 41	·1124					
20. 16	41. 35	19. 38	·1117					
20. 39	43. 40	20. 55	·1110					
21. 3	43. 15	21. 15	·1111					
21. 20	44. 35	21. 33	·1108					
21. 28	44. 5	22. 11	·1111					
21. 58	45. 15		***					
22. 3	46. 35	23. 8	·1110					
23. 0	49. 40	23. 34	·1113					
23. 7	49. 25	23. 59	·1113					
23. 29	50. 10							
23. 38	50. 50							
23. 39	50. 10							
23. 59	50. 25							
May 5		May 5		May 5		May 5		
0. 0	20. 50. 25	0. 0	·1113	0. 0	·01910	1. 0	62 ·4	62 ·0
1. 25	50. 15	0. 52	·1118	0. 54	·01860	3. 0	64 ·8	64 ·8
2. 31	50. 20	1. 56	·1126	1. 30	·01840	9. 0	64 ·9	63 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 5		May 5		May 5		May 5		
h m	° ′ ″	h m		h m		h m	°	°
2. 58	20. 49. 55	2. 10	·1130	2. 43	·01700	21. 0	55·2	54·6
3. 45	49. 25	2. 55	·1129	3. 23	·01673	22. 0	55·8	55·5
4. 2	48. 30	3. 27	·1133	4. 56	·01480	23. 0	56·8	56·2
4. 17	48. 40	3. 36	·1131	9. 0	·01490			
4. 36	47. 45	4. 6	·1124	10. 0	·01525			
5. 26	45. 35	4. 23	·1141	10. 18	·01520			
5. 35	45. 5	4. 31	·1140	15. 9	·01846			
6. 6	45. 15	5. 1	·1123	15. 41:	·01823			
7. 22	45. 10	5. 30	·1124	16. 8	·01863			
7. 51	45. 40	5. 55	·1135	21. 19	·01790			
8. 40	43. 40	6. 7	·1135	22. 27	·01790			
9. 15	44. 0	6. 11	·1137	23. 59	·01740			
9. 26	41. 15	6. 38	·1135					
9. 40	41. 25	6. 56	·1139					
10. 0	44. 15	7. 11	·1134					
10. 22	39. 55	7. 30	·1138					
10. 36	39. 0	7. 59	·1130					
10. 39	40. 25	8. 19	·1132					
10. 47	40. 0	8. 34	·1128					
11. 1	42. 20	9. 18	·1130					
	***	9. 36	·1124					
11. 59	44. 45	10. 7	·1136					
12. 23	42. 35	10. 25	·1126					
	***	10. 38	·1129					
13. 10	44. 25	10. 42	·1128					
13. 22	43. 0	10. 58	·1130					
13. 52	43. 15	11. 10	·1127					
14. 6	44. 55	11. 28	·1127					
14. 43	44. 45	11. 58	·1131					
15. 5	57. 20	12. 12	·1130					
15. 47	40. 10	12. 29	·1132					
	***	12. 40	·1130					
16. 40	39. 25	13. 7	·1134					
16. 52	40. 30	13. 34	·1129					
17. 20	38. 35	13. 38	·1131					
18. 40	39. 0	13. 46	·1128					
18. 45	39. 50	14. 0	·1132					
18. 52	39. 5	14. 15	·1134					
19. 15	39. 30	14. 53	·1133					
19. 26	40. 20	15. 28	·1146					
19. 44	39. 35	15. 52	·1133					
20. 0	41. 0	16. 13	·1135					
20. 7	40. 25	16. 20	·1133					
20. 46	42. 0	16. 45	·1131					
20. 52	42. 55	16. 52	·1133					
21. 38	44. 45	17. 14	·1130					
22. 22	47. 35		***					
23. 5	49. 25	18. 53	·1125					
23. 22	50. 40		***					
23. 57	51. 55	20. 12	·1122					
	(†)	20. 51	·1117					
		21. 17	·1114					
		21. 27	·1116					
		22. 20	·1112					
		22. 57	·1112					
		23. 6	·1109					
		23. 16	·1112					
		23. 32	·1112					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		May 5						
h m	° ′ ″	h m		h m		h m	°	°
		23. 53	·1118					
			(†)					
May 6		May 6		May 6		May 6		
	(†)		(†)					
0. 6	20. 50. 10	0. 7	·1118	0. 0	·01740	0. 0	57·9	57·5
1. 7	50. 35	1. 58	·1134	2. 0	·01695	1. 0	59·0	58·7
2. 23	47. 55	2. 22	·1132	2. 33	·01687	2. 0	60·5	60·0
2. 30	48. 10	2. 37	·1134	4. 0	·01543	3. 0	61·9	61·5
3. 35	46. 25	3. 8	·1128	7. 31	·01373	6. 0	65·0	62·0
4. 15	46. 15	3. 23	·1133	10. 30	·01360	9. 0	64·2	61·5
4. 38	44. 55	3. 35	·1134	14. 30:	·01498	12. 0	62·0	60·9
4. 45	45. 10	4. 22	·1142	18. 33	·01700	18. 0	58·3	57·0
5. 3	44. 30	4. 41	·1138	20. 43	·01787	21. 0	57·0	56·8
5. 51	45. 0	6. 34	·1143	22. 8	·01795	22. 0	57·3	57·1
6. 14	45. 45	6. 39	·1145	23. 59	·01763	23. 0	57·5	57·7
6. 42	45. 20	6. 50	·1139					
6. 59	46. 25	7. 12	·1142					
7. 23	45. 35	7. 28	·1139					
8. 13	46. 55	7. 52	·1138					
8. 44	45. 35	8. 0	·1140					
10. 39	46. 5	8. 13	·1135					
11. 48	45. 10	8. 28	·1136					
12. 52	45. 0	9. 14	·1131					
12. 58	44. 15	9. 53	·1134					
14. 43	44. 0	10. 35	·1131					
16. 0	43. 35	10. 51	·1132					
19. 22	39. 40	11. 41	·1130					
19. 37	40. 15		***					
19. 48	39. 35	15. 24	·1129					
20. 5	40. 45	16. 2	·1131					
21. 3	41. 55	17. 46	·1128					
21. 50	46. 0	18. 53	·1123					
21. 58	45. 55	20. 20	·1122					
22. 30	48. 55	20. 52	·1118					
23. 50	51. 55	21. 0	·1120					
23. 59	51. 50	21. 56	·1105					
		23. 19	·1110					
		23. 59	·1115					
May 7		May 7		May 7		May 7		
0. 0	20. 51. 50	0. 0	·1115	0. 0	·01763	0. 0	58·0	58·3
0. 15	52. 10	0. 19	·1113	1. 14	·01660	1. 0	58·7	59·0
0. 39	54. 15	0. 45	·1124	2. 39	·01626	2. 0	59·3	59·9
1. 2	54. 0	0. 57	·1122	4. 50	·01500	3. 0	60·0	60·8
1. 12	54. 35	1. 6	·1123	8. 37	·01423	9. 0	63·0	61·0
2. 6	54. 0	1. 14	·1128	11. 22	·01460	21. 0	52·3	52·0
2. 40	52. 10	1. 25	·1129	15. 5	·01723			
3. 25	51. 10	1. 32	·1131	18. 23	·01595			
4. 20	49. 0	2. 0	·1117	18. 26	·01567			
	(†)	2. 16	·1116	19. 19	·01596			
5. 7	48. 0	2. 57	·1127	19. 26	·01580			
5. 56	44. 40	3. 15	·1126	21. 30	·01565			
6. 33	44. 40	3. 24	·1123	21. 31	·01520			
7. 21	46. 5	3. 37	·1126	22. 45	·01538			
7. 59	45. 10	3. 53	·1127	23. 59	·01525			
8. 23	46. 25	4. 8	·1135					
8. 38	46. 5	4. 25	·1133					
			(†)					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 7. The motion of the Declination and Horizontal-Force cylinder was impeded from $4^{h}.\ 25^{m}.$ to $5^{h}.\ 7^{m}.$

Greenwich Mean Solar Time.	Western Declination.
May 7	
h m	° ′ ″
9. 16	20. 46. 25
9. 53	46. 0
9. 59	46. 35
10. 12	46. 5
10. 35	44. 15
11. 54	45. 40
13. 44	44. 40
15. 40	46. 10
16. 13	43. 50
16. 59	47. 5
17. 37	44. 30
19. 10	40. 25
19. 25	41. 0
20. 10	39. 5
20. 59	39. 45
21. 4	38. 50
22. 18	45. 35
23. 45	51. 0
23. 51	52. 5
23. 59	51. 15
May 8	
0. 0	20. 51. 15
0. 15	52. 50
0. 24	52. 10
0. 43	53. 10
2. 16	50. 55
2. 25	51. 30
2. 33	51. 0
2. 39	51. 40
2. 53	51. 20
3. 1	53. 0
3. 8	52. 10
3. 23	52. 35
3. 38	50. 55
3. 43	52. 5
3. 57	51. 0
4. 13	50. 30
4. 17	51. 20
4. 23	50. 50
5. 16	50. 25
6. 5	51. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 7	
h m	
5. 9	·1146
5. 23	·1138
5. 51	·1133
6. 7	·1137
6. 44	·1136
7. 8	·1140
7. 47	·1130
7. 55	·1131
8. 2	·1128
8. 32	·1126
8. 58	·1128
9. 23	·1124
10. 0	·1125
10. 21	·1129
11. 15	·1123
11. 43	·1124
12. 33	·1122
14. 42	·1126
14. 57	·1128
15. 7	·1127
15. 58	·1130
16. 53	·1127
17. 20	·1132
18. 58	·1135
20. 17	·1131
21. 7	·1124
21. 22	·1124
21. 47	·1118
22. 7	·1116
22. 38	·1110
23. 5	·1112
23. 22	·1110
23. 45	·1112
23. 48	·1114
23. 59	·1114
May 8	
0. 0	·1114
0. 49	·1122
	(†)
1. 0	·1127
1. 28	·1128
1. 55	·1132
2. 41	·1150
2. 47	·1158
2. 58	·1158
3. 2	·1166
3. 14	·1170
3. 43	·1152
3. 53	·1158
4. 5	·1156
4. 19	·1156
4. 53	·1171
5. 12	·1176
5. 34	·1170
5. 53	·1174
6. 0	·1170

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 7	
May 8	
0. 0	·01525
1. 8	·01620
1. 10	·01653
2. 22	·01630
4. 27	·01473
7. 20	·01360
7. 58	·01360
10. 11	·01320
11. 47	·01360
12. 3	·01340
12. 18	·01330
12. 33	·01300
12. 58	·01320
14. 33	·01460
15. 45	·01526
18. 56	·01703
19. 53	·01680
21. 56	·01680
	·01575
22. 57	·01600

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 7		
May 8		
1. 0	55·9	55·0
3. 0	58·2	57·8
9. 0	61·7	58·8
21. 0	51·6	51·7

Greenwich Mean Solar Time.	Western Declination.
May 8	
h m	° ′ ″
6. 26	20. 49. 15
6. 40	50. 40
7. 21	43. 35
7. 28	43. 10
7. 52	43. 45
8. 0	46. 0
8. 27	47. 30
8. 47	47. 10
8. 51	45. 35
9. 0	41. 55
9. 36	45. 5
9. 40	45. 55
9. 43	44. 35
9. 51	45. 10
10. 0	43. 40
10. 10	44. 40
10. 23	45. 0
10. 30	43. 45
10. 44	43. 30
10. 59	44. 30
11. 7	46. 35
11. 23	47. 5
11. 30	50. 0
11. 45	47. 25
11. 57	42. 20
12. 12	42. 15
12. 25	36. 30
12. 32	37. 25
12. 38	35. 35
12. 40	35. 40
12. 43	35. 55
12. 46	33. 50
12. 52	36. 55
13. 3	28. 55
13. 16	27. 5
13. 48	34. 10
14. 36	41. 0
15. 0	36. 35
15. 6	38. 10
15. 14	36. 5
15. 51	36. 10
16. 20	38. 0
16. 24	42. 25
16. 29	37. 40
16. 38	37. 5
16. 51	39. 45
17. 7	37. 45
17. 27	43. 45
17. 30	38. 50
17. 45	40. 10
17. 52	36. 5
18. 18	44. 10
18. 23	41. 50
18. 28	43. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 8	
h m	
6. 8	·1175
6. 54	·1148
7. 11	·1148
7. 53	·1158
8. 32	·1145
8. 38	·1147
8. 57	·1142
9. 26	·1143
9. 44	·1150
9. 54	·1147
10. 2	·1133
10. 9	·1141
10. 17	·1132
10. 24	·1136
10. 37	·1135
10. 41	·1137
10. 45	·1130
10. 51	·1136
11. 0	·1137
11. 7	·1146
11. 14	·1142
11. 30	·1149
11. 53	·1137
12. 9	·1146
12. 33	·1110
12. 48	·1153
12. 59	·1097
13. 13	·1088
13. 23	·1099
13. 27	·1099
13. 32	·1106
13. 41	·1102
13. 47	·1106
13. 53	·1104
14. 1	·1114
14. 13	·1120
14. 21	·1120
14. 25	·1127
14. 32	·1121
14. 51	·1136
14. 55	·1130
15. 17	·1142
15. 58	·1128
16. 7	·1129
16. 9	·1142
16. 12	·1124
16. 16	·1128
16. 35	·1130
16. 49	·1128
17. 0	·1133
17. 28	·1128
17. 37	·1116

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 8	
23. 59	·01583

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m.	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
May 8	
h m	° ′ ″
18. 34	20. 41. 50
18. 39	44. 5
18. 43	41. 55
18. 47	44. 30
18. 52	43. 5
	***
19. 33	43. 0
19. 48	41. 10
	***
20. 0	42. 20
20. 10	40. 40
	***
21. 0	43. 45
21. 17	47. 35
21. 22	44. 55
	***
22. 32	47. 0
22. 35	48. 35
23. 1	48. 10
23. 40	49. 45
23. 53	49. 10
23. 59	49. 40
May 9	
0. 0	20. 49. 40
0. 34	50. 30
0. 44	49. 25
1. 2	49. 10
1. 13	50. 0
1. 44	49. 10
1. 53	49. 50
2. 8	48. 55
2. 30	49. 5
3. 33	47. 20
4. 34	46. 55
5. 13	44. 20
5. 30	44. 25
5. 39	43. 35
5. 46	44. 10
5. 58	43. 40
7. 20	45. 0
8. 33	45. 25
9. 17	46. 35
9. 59	45. 0
10. 12	45. 30
10. 35	44. 35
11. 27	45. 25
12. 13	43. 55
13. 8	44. 50
14. 35	44. 5
14. 43	45. 0
15. 0	43. 10
15. 24	44. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 8	
h m	
17. 46	·1121
18. 0	·1122
18. 6	·1118
	***
18. 35	·1119
	***
18. 58	·1124
	***
19. 45	·1118
20. 4	·1118
	***
20. 43	·1110
21. 0	·1117
21. 4	·1107
21. 10	·1116
21. 15	·1107
	***
21. 46	·1104
21. 57	·1105
22. 15	·1102
22. 20	·1105
22. 28	·1102
22. 42	·1101
23. 23	·1106
23. 28	·1105
23. 41	·1110
	(†)
May 9	
	(†)
0. 27	·1108
0. 47	·1118
1. 0	·1112
1. 4	·1119
1. 30	·1124
1. 40	·1124
2. 0	·1131
2. 33	·1132
2. 56	·1136
3. 8	·1143
3. 22	·1136
3. 35	·1138
3. 48	·1133
4. 8	·1134
4. 22	·1136
4. 28	·1134
4. 54	·1136
5. 5	·1134
5. 23	·1139
5. 39	·1136
5. 50	·1138
6. 24	·1139
7. 0	·1135
7. 20	·1136
7. 51	·1132
8. 40	·1128
9. 1	·1129
10. 1	·1128

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 9	
h m	
0. 0	·01583
1. 41	·01540
3. 19	·01397
3. 57	·01423
6. 34	·01440
10. 9	·01390
12. 15	·01470
18. 58	·01820
20. 25	·01844
22. 45	·01814
23. 59	·01850

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 9		
h m	°	°
1. 0	56 ·7	56 ·8
3. 0	59 ·6	60 ·0
9. 0	63 ·5	61 ·9
22. 45	56 ·5	56 ·0

Greenwich Mean Solar Time.	Western Declination.
May 9	
h m	° ′ ″
15. 37	20. 43. 0
15. 45	43. 50
16. 16	42. 10
17. 44	42. 10
17. 51	40. 45
17. 58	42. 0
18. 12	39. 0
18. 30	43. 45
18. 36	43. 0
18. 45	44. 25
19. 5	42. 25
19. 15	42. 50
20. 22	41. 45
20. 30	43. 0
20. 46	42. 50
21. 1	43. 30
21. 16	42. 55
21. 51	44. 40
22. 23	45. 10
22. 47	47. 50
23. 0	47. 40
23. 10	48. 25
23. 20	48. 20
23. 24	49. 0
23. 59	49. 0
May 10	
0. 0	20. 49. 0
1. 3	48. 35
1. 37	49. 25
1. 53	48. 20
2. 0	48. 50
2. 42	48. 5
4. 12	48. 5
4. 52	46. 55
5. 6	47. 0
6. 39	44. 40
7. 5	45. 0
8. 2	44. 50
8. 28	46. 0
8. 58	44. 35
9. 0	46. 5
9. 52	46. 10
9. 58	46. 40
10. 23	45. 35
12. 43	45. 40
13. 0	45. 50
13. 11	44. 30
13. 24	44. 15
13. 33	45. 0
14. 4	44. 50
14. 30	43. 50
14. 39	44. 10
15. 9	43. 0
16. 22	42. 40
17. 8	41. 20
17. 25	41. 35
18. 1	41. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 9	
h m	
10. 19	·1126
11. 7	·1128
11. 16	·1129
11. 56	·1125
	***
13. 52	·1126
14. 8	·1127
14. 16	·1126
14. 40	·1129
	***
15. 46	·1129
16. 10	·1126
16. 52	·1130
18. 15	·1128
18. 28	·1131
19. 27	·1127
19. 45	·1128
20. 45	·1125
21. 8	·1121
21. 43	·1119
	(†)
23. 45	·1116
23. 59	·1118
May 10	
0. 0	·1118
0. 21	·1121
0. 32	·1120
0. 57	·1121
1. 31	·1128
1. 48	·1124
2. 21	·1131
2. 38	·1129
3. 48	·1134
4. 0	·1133
4. 37	·1140
4. 48	·1137
5. 8	·1140
5. 31	·1139
5. 47	·1144
6. 35	·1143
6. 43	·1144
7. 8	·1142
7. 58	·1141
8. 9	·1144
8. 46	·1139
9. 0	·1138
9. 45	·1136
10. 26:	·1139
11. 7	·1133
11. 29	·1136
11. 44	·1133
12. 17	·1136
12. 25	·1135
13. 0	·1136
13. 15	·1134

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 10	
h m	
0. 0	·01850
1. 53	·01780
5. 30	·01720
8. 51	·01630
10. 25	·01613
12. 3	·01650
17. 0	·01857
21. 19	·01720
23. 59	·01750

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 10		
h m	°	°
9. 0	60 ·4	60 ·0
21. 0	54 ·0	53 ·1

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet
May 10		May 10						
h m	° ′ ″	h m		h m		h m	°	°
18. 28	20. 42. 50	15. 32	·1133					
18. 39	41. 50	17. 0	·1135					
18. 56	42. 10	17. 46	·1136					
19. 20	41. 5	18. 24	·1132					
19. 26	41. 40	18. 47	·1134					
19. 40	40. 50		***					
20. 6	41. 25	20. 4	·1132					
20. 16	41. 0	20. 16	·1133					
20. 23	42. 5	20. 47	·1129					
20. 31	41. 30	21. 40	·1126					
20. 41	42. 5		***					
20. 51	41. 40	23. 1	·1129					
21. 28	45. 0	23. 22	·1127					
22. 14	45. 25	23. 40	·1132					
	***	23. 53	·1126					
22. 58	47. 55	23. 59	·1125					
23. 2	48. 45							
23. 27	48. 40							
23. 45	50. 15							
23. 59	50. 10							
May 11		May 11		May 11		May 11		
0. 0	20. 50. 10	0. 0	·1125	0. 0	·01750	1. 0	57 ·7	57 ·0
0. 18	50. 5	0. 19	·1123	4. 50	·01520	3. 0	59 ·8	58 ·5
1. 1	51. 50	0. 32	·1124	8. 0	·01506	9. 0	60 ·7	58 ·0
1. 15	51. 30	0. 43	·1128	10. 55	·01545	21. 0	55 ·6	55 ·0
1. 38	51. 55	1. 24	·1129	16. 35	·01720			
2. 2	51. 30	1. 48	·1137	19. 10	{·01720 ·01600			
2. 15	51. 5	2. 7	·1134					
2. 24	50. 0	2. 21	·1141	21. 4	·01570			
2. 27	50. 55	2. 42	·1146		(†)			
3. 0	49. 10	2. 53	·1142	23. 10	·01510			
3. 24	48. 50	3. 9	·1148	23. 59	·01506			
3. 35	48. 10	3. 15	·1147					
3. 51	46. 25	3. 30	·1155					
4. 28	47. 30	3. 44	·1151					
4. 32	48. 10	3. 59	·1153					
4. 59	45. 10	4. 14	·1152					
5. 5	46. 50	4. 20	·1156					
5. 24	46. 0	4. 23	·1154					
5. 38	47. 5	4. 30	·1157					
6. 29	45. 55	4. 42	·1150					
7. 22	45. 25	5. 0	·1152					
7. 40	46. 0	5. 8	·1148					
7. 50	45. 20	5. 20	·1148					
8. 1	45. 30	5. 36	·1157					
8. 18	45. 0	6. 1	·1146					
9. 32	47. 0	6. 25	·1150					
11. 7	45. 50	6. 40	·1149					
11. 15	47. 15	7. 14	·1151					
11. 37	45. 35	7. 47	·1140					
11. 56	45. 50	8. 40	·1145					
12. 20	44. 5	9. 0	·1144					
12. 30	45. 40	9. 40	·1146					
12. 42	44. 25	10. 53	·1143					
12. 52	41. 30	11. 9	·1153					
13. 9	42. 25	11. 27	·1147					
13. 23	39. 35	12. 0	·1146					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet
May 11		May 11						
h m	° ′ ″	h m		h m		h m	°	°
13. 37	20. 38. 35	12. 19	·1141					
13. 49	41. 0	12. 41	·1144					
14. 9	41. 25	12. 48	·1138					
14. 26	39. 0	13. 8	·1145					
15. 7	39. 10	13. 30	·1134					
15. 29	39. 55	14. 7	·1136					
15. 37	40. 50	14. 13	·1134					
16. 1	40. 0	14. 54	·1128					
16. 12	40. 45	15. 13	·1131					
16. 28	39. 5	15. 23	·1130					
16. 31	39. 30	15. 34	·1134					
16. 52	38. 20	15. 39	·1132					
17. 28	38. 5	16. 11	·1136					
18. 0	40. 40	16. 23	·1134					
18. 7	39. 35	16. 34	·1136					
18. 10	42. 5	17. 19	·1131					
18. 15	39. 55	18. 0	·1130					
18. 18	41. 40	18. 7	·1128					
18. 32	40. 20	18. 10	·1132					
18. 52	40. 40	18. 23	·1130					
19. 0	43. 0	18. 33	·1129					
19. 44	41. 5	18. 52	·1129					
19. 54	43. 50	19. 6	·1131					
20. 20	42. 20	19. 22	·1130					
21. 44	45. 0	19. 28	·1127					
22. 12	47. 40	19. 41	·1127					
22. 18	47. 50	19. 51	·1129					
22. 38	50. 50	20. 19	·1125					
23. 23	51. 45	20. 39	·1126					
23. 59	51. 50	20. 44	·1124					
		21. 30	·1122					
		21. 48	·1126					
		22. 48	·1117					
		23. 1	·1119					
		23. 23	·1120					
		23. 25	·1122					
		23. 40	·1117					
		23. 59	·1121					
May 12		May 12		May 12		May 12		
0. 0	20. 51. 50	0. 0	·1121	0. 0	·01506	1. 0	56 ·9	56 ·2
0. 6	51. 55	0. 30	·1115	0. 39	·01490	3. 0	58 ·9	56 ·1
0. 16	51. 20	0. 40	·1122	1. 56	·01510	9. 0	59 ·5	59 ·0
0. 30	53. 20	1. 23	·1115	5. 54	·01444	21. 0	57 ·8	56 ·5
0. 54	53. 15	1. 49	·1124	9. 24	·01463	22. 0	58 ·2	57 ·0
1. 45	54. 40	2. 6	·1114	12. 7	{·01453 ·01340	23. 0	58 ·9	57 ·6
1. 59	52. 35	2. 30	·1132					
2. 16	54. 25	3. 0	·1117	13. 27	·01320			
2. 26	53. 45	3. 45	·1139	13. 56	·01227			
2. 31	52. 5	4. 16	·1111	15. 10	·01322			
2. 53	51. 25	4. 32	·1134	18. 15	·01375			
3. 7	51. 55	4. 48	·1124	20. 45	{·01350 ·01245			
3. 16	53. 0	5. 8	·1124					
3. 30	52. 10	5. 25	·1128	21. 33	·01240			
3. 52	52. 5	5. 35	·1135	23. 27	·01215			
4. 6	49. 15	5. 41	·1132	23. 59	·01210			
4. 20	50. 50	6. 22	·1133					
4. 38	48. 5	6. 43	·1141					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 12		May 12						
h m	° ′ ″	h m		h m		h m	°	°
5. 22	20. 48. 45	6. 55	·1137					
5. 34	47. 20	7. 10	·1139					
6. 7	47. 30	7. 19	·1136					
6. 15	46. 40	7. 38	·1137					
6. 18	47. 45	7. 47	·1141					
6. 30	47. 35	7. 55	·1137					
6. 51	46. 25	8. 0	·1142					
7. 15	47. 5	8. 11	·1138					
7. 51	46. 30	8. 23	·1142					
8. 4	45. 0	8. 49	·1133					
8. 26	44. 40	9. 8	·1132					
8. 46	41. 15	9. 36	·1131					
8. 59	39. 5	9. 47	·1135					
9. 1	41. 30	10. 11	·1136					
9. 19	43. 10	10. 32	·1130					
9. 33	42. 30	10. 47	·1130					
9. 47	44. 20	10. 55	·1133					
10. 15	45. 10	11. 4	·1133					
10. 45	44. 5	11. 9	·1130					
10. 59	45. 10	11. 18	·1134					
11. 45	45. 0		***					
11. 54	45. 35	11. 57	·1134					
12. 9	43. 45	12. 15	·1132					
12. 31	44. 30	12. 38	·1140					
12. 46	43. 25	12. 53	·1134					
12. 58	42. 0	13. 24	·1132					
13. 22	50. 55	13. 33	·1138					
13. 54	38. 40	13. 44	·1137					
14. 3	40. 20	13. 59	·1128					
14. 7	39. 5	14. 7	·1129					
14. 14	40. 5	14. 21	·1123					
14. 21	41. 35	14. 24	·1126					
14. 30	40. 0	14. 29	·1120					
14. 52	40. 55		***					
15. 4	42. 50	14. 55	·1123					
15. 55	43. 5	15. 2	·1126					
16. 2	42. 5		***					
16. 10	42. 30	16. 37	·1127					
16. 34	40. 10	16. 44	·1129					
16. 41	41. 55	16. 48	·1127					
16. 47	40. 20		***					
16. 58	41. 35	17. 43	·1122					
17. 12	40. 5	18. 3	·1122					
17. 16	41. 25	18. 11	·1124					
17. 26	39. 40	19. 35	·1111					
17. 31	40. 35	19. 57	·1115					
17. 46	38. 40	20. 16	·1111					
18. 0	40. 25	20. 23	·1114					
18. 6	39. 55	21. 0	·1114					
18. 14	41. 50	21. 40	·1115					
18. 37	43. 30	21. 53	·1117					
18. 42	42. 20	22. 0	·1115					
18. 53	42. 0	22. 8	·1118					
19. 2	40. 0	22. 22	·1114					
19. 16	42. 45	22. 32	·1118					
19. 22	42. 25	23. 1	·1112					
19. 30	44. 55	23. 12	·1102					
19. 40	44. 0	23. 31	·1097					
May 12		May 12						
h m	° ′ ″	h m		h m		h m	°	°
19. 55	20. 45. 5	23. 59	·1095					
20. 14	44. 15							
20. 22	42. 30							
20. 28	43. 45							
21. 31:	45. 20							
	***							
22. 18	49. 20							
	***							
22. 56	53. 50							
23. 30	54. 10							
23. 59	56. 50							
May 13		May 13		May 13		May 13		
0. 0	20. 56. 50	0. 0	·1095	0. 0	·01210	0. 0	60 ·0	57 ·3
0. 7	57. 20	0. 4	·1096	0. 30	·01220	1. 0	60 ·6	58 ·8
0. 37	53. 35	0. 16	·1107	1. 55	·01283	2. 0	61 ·7	59 ·2
0. 55	52. 25	0. 30	·1107	2. 24	·01280	3. 0	62 ·1	59 ·6
1. 0	53. 15	0. 40	·1102	3. 45	·01360	6. 0	63 ·1	60 ·1
1. 37	53. 35	0. 52	·1104	4. 35	·01370	9. 0	62 ·6	60 ·2
2. 25	51. 5	1. 1	·1109	5. 38	·01440	12. 0	60 ·9	58 ·0
2. 38	51. 40	1. 45	·1126	8. 14	·01448	18. 0	56 ·9	55 ·7
2. 55	50. 25	2. 0	·1120	8. 34	·01430	21. 0	55 ·0	54 ·5
3. 42	49. 55	2. 36	·1119	8. 53	·01426	22. 0	55 ·7	55 ·0
4. 16	47. 55	2. 55	·1129	9. 10	·01340	23. 0	56 ·1	55 ·8
4. 39	48. 40	3. 6	·1125	9. 20	·01365			
5. 5	45. 5	3. 22	·1131	9. 27	·01350			
5. 15	44. 35	3. 36	·1131	9. 37	·01360			
5. 23	40. 0	3. 53	·1139	9. 48	·01350			
5. 32	42. 0	4. 37	·1123	10. 1	·01367			
5. 44	40. 55	5. 8	·1136	10. 27	·01364			
5. 56	42. 55	5. 12	·1136	11. 23	·01407			
6. 44	44. 0	5. 20	·1139	11. 57	·01400			
6. 58	46. 5	5. 29	·1138	14. 38	·01500			
7. 10	46. 25	5. 40	·1149	15. 20	·01480			
7. 45	43. 25	6. 3	·1124	16. 23	·01580			
8. 7	43. 5	6. 20	·1120	16. 55	·01586			
8. 18	38. 10	6. 40	·1132	18. 30:	·01713			
8. 35	45. 0	6. 45	·1129	20. 10	·01752			
8. 42	58. 25	6. 57	·1131	23. 46	·01720			
9. 4	29. 20	7. 10	·1128	23. 59	·01710			
9. 14	38. 35	7. 17	·1133					
9. 20	36. 45	7. 27	·1130					
9. 26	40. 50	7. 43	·1132					
9. 39	33. 50	7. 48	·1129					
10. 14	43. 0	7. 54	·1130					
10. 39	39. 5	8. 8	·1127					
11. 0	41. 5	8. 19	·1113					
11. 10	40. 35	8. 28	·1126					
11. 22	42. 50	8. 36	·1124					
11. 37	40. 0	8. 45	·1143					
	***	8. 58	·1108					
12. 15	37. 55	9. 12	·1138					
12. 37	38. 40	9. 23	·1129					
12. 48	41. 5	9. 31	·1110					
	(†)	9. 49	·1119					
13. 26	38. 50	10. 6	·1116					
13. 45	37. 55	10. 23	·1103					
13. 59	40. 0	10. 35	·1104					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 13		May 13						
h m	° ′ ″	h m		h m		h m	°	°
14. 12	20. 39. 0	10. 53	·1110					
14. 24	41. 55	11. 2	·1109					
14. 50	43. 10	11. 38	·1118					
15. 7	41. 45	12. 43	·1110					
15. 26	44. 20	12. 55	·1117					
15. 48	43. 30	13. 11	·1116					
16. 0	45. 0	13. 19	·1119					
16. 16	42. 30	13. 30	·1116					
16. 28	44. 35	13. 41	·1122					
16. 49	39. 0	13. 50	·1120					
16. 57	40. 0	14. 13	·1128					
17. 4	37. 50	14. 21	·1128					
17. 9	41. 30	14. 29	·1134					
17. 14	40. 5	14. 53	·1116					
17. 20	41. 55	15. 21	·1112					
17. 26	40. 10	16. 6	·1117					
17. 46	41. 50	16. 33	·1128					
17. 58	40. 0	16. 52	·1116					
	***	17. 8	·1110					
18. 38	41. 30	17. 16	·1116					
18. 44	39. 50	17. 25	·1116					
	***	17. 29	·1113					
19. 16	40. 20	17. 39	·1114					
19. 24	39. 0	17. 59	·1112					
19. 28	40. 45	18. 38	·1115					
19. 32	39. 25	18. 52	·1112					
19. 39	41. 5	20. 1	·1105					
19. 45	40. 0	20. 38	·1105					
	***	20. 46	·1108					
20. 10	41. 50	21. 6	·1105					
20. 28	40. 10	21. 23	·1104					
20. 39	40. 40	21. 40	·1106					
20. 45	42. 25	21. 55	·1101					
21. 5	42. 20	22. 17	·1100					
22. 22	47. 25	22. 26	·1105					
22. 33	47. 0	22. 38	·1106					
22. 41	48. 55	22. 43	·1111					
22. 51	48. 0	22. 50	·1106					
22. 59	50. 5	23. 0	·1113					
23. 15	51. 15	23. 36	·1106					
23. 22	50. 0	23. 45	·1106					
23. 27	52. 0	23. 59	·1109					
23. 33	50. 55							
23. 40	52. 45							
23. 46	51. 55							
23. 59	53. 0							
May 14		May 14		May 14		May 14		
0. 0	20. 53. 0	0. 0	·1109	0. 0	·01710	0. 0	56·7	56·0
0. 10	53. 5	0. 8	·1112	3. 15	·01662	1. 0	58·0	57·0
0. 30	52. 30	0. 23	·1108	4. 40	·01580	3. 0	60·0	58·2
0. 52	54. 0	0. 42	·1111	8. 41	·01505	9. 0	61·1	58·2
1. 37	53. 10	0. 55	·1118	11. 50	·01567	21. 0	57·8	57·0
1. 54	54. 35	1. 7	·1114	15. 15	·01575			
2. 7	52. 40	1. 17	·1114	16. 10	·01597			
2. 40	49. 45	1. 40	·1118	19. 14	·01618			
2. 49	50. 0	1. 49	·1116	19. 58	·01640			
3. 2	49. 0	2. 5	·1123	23. 59	·01605			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 14		May 14						
h m	° ′ ″	h m		h m		h m	°	°
3. 21	20. 49. 5	2. 12	·1120					
3. 45	49. 55	2. 19	·1124					
3. 59	48. 55	2. 37	·1112					
4. 7	49. 5	2. 50	·1130					
4. 37	47. 50	3. 14	·1130					
4. 45	48. 25	3. 30	·1132					
4. 55	47. 15	3. 38	·1135					
5. 30	46. 5	3. 51	·1134					
5. 43	42. 35	4. 0	·1128					
5. 55	44. 40	4. 9	·1130					
6. 5	45. 0	4. 30	·1125					
6. 25	42. 25	4. 50	·1140					
6. 45	42. 35	5. 4	·1137					
7. 0	44. 10	5. 11	·1133					
7. 11	43. 10	5. 23	·1138					
7. 51	45. 0	5. 38	·1137					
8. 40	42. 25	5. 54	·1155					
9. 12	44. 25	6. 14	·1137					
9. 24	43. 0	6. 37	·1139					
9. 34	43. 55	6. 51	·1137					
9. 47	42. 50	7. 7	·1129					
9. 57	44. 10	7. 16	·1130					
10. 16	44. 15	8. 33	·1120					
10. 28	41. 0	8. 42	·1121					
10. 43	41. 10	8. 57	·1117					
11. 4	43. 0	9. 18	·1125					
11. 38	40. 15	9. 44	·1117					
12. 10	41. 40	9. 53	·1121					
12. 30	41. 5	10. 14	·1115					
13. 6	42. 10	10. 22	·1119					
13. 18	41. 20	10. 29	·1117					
13. 43	41. 5	10. 52	·1124					
	(†)	11. 13	·1121					
14. 59	40. 25	11. 59	·1132					
15. 14	39. 55	12. 26	·1126					
15. 24	42. 0	13. 8	·1127					
	***	13. 57	·1124					
16. 9	44. 55	14. 39	·1126					
	***	14. 52	·1120					
16. 54	43. 0	15. 0	·1122					
17. 42	52. 45	15. 7	·1118					
17. 55	51. 35							
18. 7	49. 0	15. 42	·1124					
18. 18	48. 35	15. 56	·1124					
18. 34	52. 55	16. 8	·1126					
18. 40	51. 40	16. 28	·1126					
18. 43	52. 30	16. 53	·1131					
18. 58	49. 25	17. 44	·1103					
19. 6	51. 5	17. 58	·1101					
19. 13	49. 25	18. 15	·1106					
19. 18	49. 15	18. 24	·1102					
19. 30	46. 0	18. 35	·1104					
19. 41	45. 15	18. 57	·1100					
19. 58	48. 20	19. 18	·1106					
20. 14	47. 0	20. 0	·1099					
20. 23	46. 40	20. 52	·1092					
20. 29	47. 55	21. 10	·1092					
20. 58	46. 15	21. 20	·1089					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 14		May 14						
h m	° ′ ″	h m		h m		h m	°	°
21. 55	20. 51. 0	21. 44	·1087					
22. 12	50. 0	21. 59	·1098					
22. 20	51. 5	22. 5	·1095					
22. 28	50. 35	22. 15	·1102					
22. 38	52. 50	22. 23	·1098					
23. 20	54. 0	22. 35	·1102					
23. 59	54. 50	22. 54	·1102					
			(†)					
		23. 45	·1099					
		23. 59	·1102					
May 15		May 15		May 15		May 15		
0. 0	20. 54. 50	0. 0	·1102	0. 0	·01605	1. 0	59·7	59·0
0. 8	56. 45	0. 10	·1105	3. 41	·01590	3. 0	61·0	59·3
0. 57	50. 35	0. 54	·1103	10. 12	·01445	9. 0	62·0	59·7
1. 9	51. 5	2. 8	·1120	10. 30:	·01455	21. 0	55·9	55·0
1. 13	55. 20	2. 16	·1125	11. 5	·01360			
	***	2. 38	·1119	11. 53	·01360			
2. 10	56. 15	2. 50	·1119	13. 33	·01545			
2. 23	55. 30	3. 9	·1124	16. 8	·01620			
3. 7	54. 10	3. 23	·1117	18. 40:	·01740			
3. 17	52. 50	3. 30	·1121	21. 6	·01710			
3. 26	53. 10	3. 37	·1117	22. 8	·01700			
3. 56	50. 50	3. 49	·1122		·01570			
4. 48	49. 10	3. 59	·1118	23. 59	·01520			
5. 2	51. 10	4. 25	·1120					
5. 14	48. 35	4. 50	1126					
5. 27	47. 40	5. 3	·1150					
5. 38	48. 45	5. 22:	·1131					
5. 45	47. 5	5. 39	·1143					
6. 0	46. 40	5. 46	·1135					
6. 13	47. 0	6. 1	·1135					
6. 26	44. 40	6. 12	·1140					
6. 48	39. 40	6. 20	·1134					
7. 13	44. 25	6. 28	·1138					
7. 26	43. 0	6. 44	·1137					
7. 38	42. 35	6. 57	·1148					
7. 57	40. 35	7. 28	·1128					
8. 19	40. 0	7. 45	·1124					
8. 52	42. 0	7. 59	·1127					
9. 10	41. 40	8. 6	·1124					
9. 22	39. 40	8. 13	·1127					
9. 43	34. 5	8. 19	·1124					
10. 2	35. 0	8. 45	·1121					
10. 10	37. 5	8. 58	·1124					
10. 15	36. 5	9. 7	·1118					
10. 18	37. 15	9. 18	·1116					
10. 23	36. 5	9. 40	·1118					
10. 39	51. 40	10. 7	·1105					
11. 10	38. 30	10. 27	·1133					
11. 19	41. 50	10. 40	·1120					
11. 38	40. 5	10. 42	·1122					
11. 45	42. 45	10. 53	·1114					
12. 24	42. 0	11. 8	·1124					
12. 37	44. 30	11. 10	·1121					
12. 48	44. 0	11. 16	·1125					
12. 54	45. 35	11. 26	·1118					
13. 18	46. 55	11. 40	·1122					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 15		May 15						
h m	° ′ ″	h m		h m		h m	°	°
13. 28	20. 45. 55	11. 44	·1127					
13. 41	49. 5	11. 58	·1121					
14. 0	49. 10	12. 4	·1124					
14. 22	45. 55	12. 16	·1119					
14. 32	45. 5	12. 39	·1123					
14. 45	46. 30	12. 46	·1120					
14. 55	45. 35	13. 13	·1120					
15. 2	46. 5	13. 27	·1125					
16. 11	43. 25	13. 54	·1121					
16. 18	42. 15	14. 17	·1129					
16. 23	43. 50	14. 38	·1122					
16. 43	44. 20	15. 9	·1132					
16. 45	42. 30	15. 29	·1133					
16. 53	43. 5	15. 45	·1129					
	***	15. 54	·1121					
18. 43	41. 0	16. 9	·1117					
18. 52	39. 30	16. 30	·1120					
19. 3	40. 35	17. 13	·1118					
19. 15	39. 5	17. 43	·1118					
19. 21	40. 15		***					
19. 28	39. 0	20. 38	·1104					
19. 30	41. 45	21. 18	·1105					
19. 36	41. 5	21. 25	·1109					
19. 44	42. 35	21. 33	·1106					
19. 51	41. 25	22. 9	·1106					
20. 12	43. 0	22. 35	·1109					
20. 30	43. 5	23. 31	·1108					
21. 22	44. 40	23. 44	·1110					
21. 30	46. 15	23. 53	·1105					
22. 3	47. 20	23. 59	·1106					
23. 44	52. 55							
23. 55	52. 15							
23. 59	52. 45							
May 16		May 16		May 16		May 16		
0. 0	20. 52. 45	0. 0	·1106	0. 0	·01520	1. 0	58·6	57·0
0. 10	53. 45	0. 12	·1110	2. 19	·01524	3. 0	60·1	58·0
0. 34	53. 5	0. 28	·1110	3. 7	·01505	9. 0	61·2	58·0
0. 44	52. 10	0. 46	·1104	5. 0	·01420	22. 0	56·2	55·9
0. 50	53. 10	1. 1	·1113	5. 51	·01400			
1. 22	51. 55	1. 23	·1113	5. 56	·01420			
1. 30	53. 0	2. 6	·1128	6. 45	·01435			
1. 50	53. 0	2. 53	·1116	10. 33	·01415			
1. 58	53. 40	3. 15	·1129	12. 45	·01460			
2. 47	50. 25	3. 28	·1124	15. 30	·01547			
3. 11	51. 35	3. 54	·1130	16. 45	·01560			
3. 23	50. 5	4. 18	·1122	17. 17	·01583			
3. 50	50. 30	4. 39	·1126	18. 53	·01625			
4. 13	48. 55	4. 52	·1122	20. 0	·01640			
4. 57	48. 10	5. 13	·1133	23. 59	·01615			
5. 22	46. 15	5. 42	·1133					
5. 32	47. 0	6. 8:	·1139					
6. 5	46. 30	6. 53	·1128					
6. 31	45. 10	7. 10	·1128					
7. 0	45. 40	7. 24	·1123					
7. 6	44. 35	8. 10	·1127					
7. 26	46. 0	8. 30	·1129					
7. 58	45. 5	9. 22	·1125					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 16		May 16						
h m	° ′ ″	h m		h m		h m	°	°
8. 0	20. 46. 15	9. 37	·1122					
8. 39	43. 35	10. 8	·1124					
9. 19	46. 0	10. 22	·1122					
9. 53	45. 0	10. 46	·1127					
10. 3	46. 5	11. 1	·1128					
10. 22	45. 10	11. 17	·1137					
10. 48	46. 10	11. 37	·1131					
11. 12	45. 5	12. 9	·1130					
11. 29	45. 55	12. 21	·1130					
11. 45	44. 0	13. 7	·1120					
11. 54	44. 50	13. 30	·1124					
12. 15	44. 25	14. 29	·1120					
12. 35	41. 55	14. 51	·1116					
13. 13	41. 55	15. 2	·1122					
13. 27	44. 0	15. 54	·1131					
14. 10	42. 20	16. 39	·1121					
14. 30	43. 45	17. 0	·1125					
14. 38	43. 20	19. 25	·1106					
15. 14	47. 0	19. 58	·1104					
15. 30	45. 0	20. 15	·1100					
15. 51	44. 35	21. 18	·1102					
16. 7	45. 45	21. 30	·1100					
16. 45	40. 10	21. 40	·1102					
17. 2	41. 45	21. 53	·1102					
17. 30	41. 15	22. 0	·1105					
17. 41	40. 0	22. 16	·1100					
18. 14	39. 55	22. 30	·1103					
18. 26	39. 0	23. 7	·1110					
18. 30	39. 50	23. 27	·1107					
18. 44	38. 55	23. 45	·1111					
18. 52	39. 50	23. 59	·1110					
19. 1	39. 20							
19. 26	39. 50							
19. 36	39. 5							
19. 45	40. 0							
20. 10	40. 35							
20. 17	40. 0							
20. 31	39. 55							
20. 43	41. 5							
21. 14	42. 35							
22. 0	46. 40							
22. 7	46. 5							
22. 23	47. 55							
23. 5	51. 35							
23. 24	51. 50							
23. 59	52. 30							
May 17		May 17		May 17		May 17		
0. 0	20. 52. 30	0. 0	·1110	0. 0	·01615	8. 0	60 ·7	59 ·0
0. 25	51. 45	0. 15	·1113	3. 15	·01637	21. 0	54 ·7	54 ·2
0. 34	52. 25	0. 27	·1111	7. 26	·01560			
1. 1	51. 50	0. 40	·1117	8. 13	·01530			
1. 27	52. 10	0. 45	·1116	12. 0	·01450			
1. 43	51. 30	1. 28	·1123	15. 0	·01500			
1. 53	52. 30	1. 47	·1120	19. 7	·01615			
2. 34	51. 55	2. 5	·1125	21. 7	·01645			
3. 3	52. 5	2. 16	·1125	23. 59	·01680			
3. 30	50. 50	2. 27	·1128					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 17		May 17						
h m	° ′ ″	h m		h m		h m	°	°
3. 46	20. 50. 55	2. 41	·1125					
4. 8	49. 15	3. 18	·1135					
4. 29	42. 10	3. 38	·1134					
4. 51	48. 0	3. 56	·1138					
5. 48	47. 0	4. 15	·1138					
5. 58	45. 55	4. 46	·1123					
6. 30	44. 15	5. 53	·1144					
6. 37	45. 0	6. 20	·1135					
7. 15	41. 15	6. 40	·1142					
7. 29	43. 15	6. 53	·1133					
7. 59	35. 5	7. 15	·1132					
8. 13	37. 0	7. 30	·1140					
8. 37	35. 40	7. 45	·1127					
9. 13	40. 45	8. 0	·1128					
9. 22	42. 55	8. 11	·1134					
10. 14	45. 25	8. 23	·1126					
10. 46	45. 0	8. 41	·1125					
10. 59	45. 50	9. 9	·1117					
11. 45	45. 5	9. 32	·1119					
12. 2	47. 30	9. 54	·1117					
12. 45	42. 5	10. 17	·1121					
13. 26	41. 5	10. 40	·1120					
13. 47	41. 45	11. 0	·1123					
14. 10	39. 55	11. 20	·1121					
14. 45	39. 35	11. 40	·1124					
14. 53	40. 25	11. 52	·1122					
15. 10	40. 30	12. 4	·1124					
15. 26	38. 45	12. 25	·1125					
15. 54	38. 20	12. 38	·1123					
16. 21	41. 55	12. 49	·1126					
16. 33	41. 30	13. 8	·1128					
17. 0	43. 35	13. 36	·1120					
17. 19	43. 5	14. 38	·1121					
17. 57	38. 10	15. 14	·1130					
18. 40	38. 5	15. 50	·1125					
18. 53	36. 30	16. 31	·1112					
19. 4	36. 10	17. 29	·1121					
19. 37	38. 35	17. 55	·1119					
19. 52	38. 0	18. 35	·1119					
20. 13	39. 25	18. 49	·1116					
20. 32	43. 0	19. 17	·1115					
20. 46	42. 55	20. 20	·1101					
21. 57	47. 55	20. 37	·1102					
23. 0	51. 5	20. 47	·1098					
23. 20	53. 5	21. 43	·1106					
23. 59	53. 50	21. 57	·1104					
		22. 9	·1106					
		22. 31	·1101					
		23. 6	·1102					
		23. 24	·1108					
		23. 59	·1105					
May 18		May 18		May 18		May 18		
0. 0	20. 53. 50	0. 0	·1105	0. 0	·01680	1. 0	58 ·3	58 ·0
0. 36	52. 55	0. 13	·1107	2. 30	·01615	3. 0	60 ·0	59 ·3
0. 47	54. 5	0. 41	·1109	5. 25	·01465	9. 0	60 ·7	58 ·4
1. 1	53. 0	1. 4	·1116	7. 0	·01457	21. 0	53 ·4	53 ·0
1. 30	53. 55	1. 11	·1114	9. 45	·01417			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
May 18		May 18		May 18				
h m	° ′ ″	h m		h m		h m	°	°
1. 47	20. 53. 5	1. 30	·1118	10. 40	·01427			
	***	1. 41	·1119	11. 15	·01400			
2. 44	53. 0	1. 55	·1117	12. 26	·01408			
3. 13	51. 0	2. 8	·1119	14. 23	·01500			
3. 25	51. 20	2. 35	·1120	15. 0	·01490			
3. 37	49. 50	2. 47	·1124	17. 40	·01620			
3. 51	50. 50	3. 25	·1118	21. 22	·01725			
5. 14	46. 20	3. 39	·1123	22. 37	·01725			
5. 36	47. 0	3. 48	·1120	23. 59	·01776			
6. 20	45. 10	4. 15	·1139					
6. 37	45. 10	4. 59	·1131					
7. 0	46. 30	5. 14	·1131					
7. 8	45. 45	5. 26	·1125					
7. 15	46. 10	5. 44	·1130					
7. 23	45. 30	5. 53	·1130					
8. 18	45. 5	6. 5	·1131					
8. 40	43. 5	6. 15	·1129					
8. 56	44. 55	6. 42:	·1134					
9. 8	42. 55	7. 8	·1128					
9. 32	45. 5	7. 25	·1126					
10. 14	44. 10	7. 39	·1127					
10. 33	41. 10	8. 9	·1124					
10. 43	44. 45	8. 27	·1127					
11. 8	34. 30	8. 38	·1124					
11. 53	45. 25	8. 52	·1130					
12. 8	45. 55	9. 6	·1122					
12. 28	43. 10	9. 17	·1127					
12. 49	44. 25	9. 28	·1122					
13. 1	43. 20	10. 9	·1123					
13. 37	43. 0	10. 28	·1144					
14. 8	51. 55	10. 52	·1118					
15. 22	42. 40	11. 7	·1136					
15. 38	42. 10	11. 30	·1134					
15. 54	40. 0	12. 0	·1116					
16. 10	40. 45	12. 33	·1123					
17. 0	38. 5	12. 44	·1121					
17. 14	39. 25	13. 42	·1118					
17. 22	38. 30	14. 22	·1129					
17. 37	41. 55	15. 19	·1126					
17. 58	39. 0	15. 54	·1120					
18. 11	40. 5	16. 8	·1123					
18. 25	40. 0	16. 26	·1122					
18. 37	41. 0	16. 54	·1127					
18. 52	39. 0	17. 15	·1118					
18. 59	39. 35	17. 54	·1120					
19. 14	38. 5	18. 26	·1107					
19. 38	38. 40	18. 52	·1105					
19. 56	41. 15	19. 14	·1100					
20. 23	41. 0	19. 32	·1103					
20. 53	43. 55	19. 56	·1100					
21. 0	43. 25	20. 23	·1107					
	***	20. 45	·1108					
22. 23	51. 10	21. 1	·1107					
22. 29	50. 55	21. 39	·1112					
22. 58	53. 35	21. 52	·1110					
23. 5	53. 20	22. 9	·1111					
23. 20	52. 20	22. 19	·1108					
23. 52	51. 55		(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
May 18		May 18						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 52. 20	23. 8	·1106					
		23. 38	·1107					
		23. 59	·1117					
May 19		May 19		May 19		May 19		
0. 0	20. 52. 20	0. 0	·1117	0. 0	·01776	1. 0	53·4	53·0
0. 8	53. 0	0. 13	·1116	1. 22	·01790	3. 0	54·0	53·0
0. 15	52. 30	0. 38	·1114	3. 41	·01843	9. 0	53·0	51·7
0. 22	53. 45	0. 48	·1117	12. 44	·01850	21. 0	50·0	50·0
0. 39	53. 0	1. 5	·1116		·01745	22. 0	50·2	50·0
0. 45	53. 50	1. 23	·1119	15. 34	·01780	23. 0	50·6	50·7
1. 20	52. 55	1. 32	·1117	16. 8	·01770			
1. 43	53. 0	1. 47	·1120	18. 18	·01800			
2. 3	51. 55	2. 1	·1117	19. 18	·01790			
2. 19	52. 20	2. 22	·1122	19. 23	·01730			
3. 23	49. 35	2. 40	·1119	23. 59	·01715			
3. 33	50. 40	3. 8	·1120					
4. 5	48. 35	3. 25	·1115					
5. 14	47. 50	3. 38	·1122					
5. 29	47. 20	3. 51	·1123					
5. 43	46. 20	4. 1	·1118					
6. 17	46. 0	4. 18	·1126					
6. 30	46. 55	4. 38	·1125					
6. 37	46. 10	4. 47	·1125					
7. 0	46. 55	4. 56	·1129					
8. 12	45. 20	5. 10	·1128					
8. 38	47. 0	5. 27	·1133					
9. 15	45. 50	5. 46	·1131					
9. 34	39. 5	6. 35	·1144					
9. 42	40. 35	6. 46	·1142					
10. 0	40. 5	7. 27	·1144					
10. 13	42. 10	7. 39	·1138					
10. 32	40. 35	8. 30	·1138					
10. 43	41. 25	8. 38	·1141					
11. 7	41. 0	9. 14	·1142					
11. 13	39. 45	9. 26	·1138					
11. 27	41. 25	9. 37	·1146					
11. 36	40. 0	9. 47	·1148					
11. 51	39. 15	9. 56	·1143					
12. 8	39. 40	10. 7	·1145					
12. 40	43. 0	10. 22	·1145					
13. 23	45. 30	10. 37	·1137					
13. 50	45. 35	11. 11	·1135					
	***	11. 22	·1140					
15. 0	44. 0	11. 38	·1138					
15. 31	46. 50	12. 6	·1122					
16. 21	44. 5	13. 6	·1132					
16. 28	44. 40	13. 38	·1128					
17. 2	40. 55	13. 57	·1132					
17. 22	42. 25	14. 1	·1130					
17. 31	41. 0	14. 45	·1131					
17. 39	41. 40	14. 50	·1129					
17. 45	40. 55	14. 58	·1133					
18. 15	40. 50	15. 17	·1132					
18. 17	43. 0	15. 37	·1135					
18. 30	40. 20	16. 23	·1134					
18. 33	41. 0	16. 31	·1136					
18. 52	40. 35	16. 46	·1134					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 19		May 19						
h m	° ′ ″	h m		h m		h m	°	°
18. 59	20. 39. 15	17. 19	·1136					
19. 1	40. 15	17. 31	·1134					
19. 8	38. 5	18. 2	·1135					
19. 16	39. 55	18. 13	·1138					
19. 47	39. 5	18. 24	·1133					
19. 53	40. 35	18. 53	·1129					
20. 6	39. 55	19. 1	·1126					
20. 27	41. 35		***					
20. 56	42. 0	20. 3	·1123					
21. 30	45. 15	20. 14	·1119					
21. 38	45. 10	21. 2	·1118					
21. 52	47. 0	21. 28	·1111					
22. 12	47. 35	21. 38	·1112					
22. 36	49. 25	22. 13	·1100					
23. 0	52. 50	22. 20	·1101					
23. 15	52. 5	22. 36	·1095					
23. 32	53. 30	22. 52	·1102					
23. 59	53. 55	23. 2	·1097					
		23. 33	·1117					
		23. 59	·1120					
May 20		May 20		May 20		May 20		
0. 0	20. 53. 55	0. 0	·1120	0. 0	·01715	0. 0	51 ·2	51 ·4
0. 13	53. 20	0. 12	·1120	2. 0	·01710	1. 0	51 ·6	51 ·8
1. 38	53. 55	0. 27	·1124	3. 15:	·01716	3. 0	54 ·2	54 ·6
1. 51	53. 0	0. 45	·1125	4. 42	·01600	6. 0	56 ·0	54 ·6
2. 13	53. 50	1. 3	·1132	3. 45	·01512	9. 8	56 ·0	54 ·4
2. 43	51. 45	1. 14	·1131	14. 5	·01490	12. 0	56 ·0	54 ·2
2. 52	52. 5	1. 27	·1134	10. 31	·01533	18. 0	54 ·2	53 ·7
3. 35	49. 55	1. 42	·1132	22. 6	·01566	21. 0	54 ·0	53 ·8
4. 1	49. 50	2. 0	·1135	23. 59	·01560	22. 0	54 ·0	54 ·6
4. 32	47. 25	2. 43	·1131			23. 0	55 ·8	55 ·0
4. 41	48. 40	2. 56	·1132					
4. 53	47. 10	3. 20	·1127					
5. 12	47. 50	3. 30	·1130					
5. 26	47. 0	3. 47	·1127					
5. 37	47. 35	3. 53	·1130					
6. 7	46. 30	4. 2	·1128					
7. 15	45. 55	4. 32	·1128					
7. 48	46. 40	4. 41	·1135					
8. 44	43. 55	4. 54	·1129					
9. 8	40. 0	5. 8	·1134					
9. 12	37. 40	5. 31	·1129					
9. 16	40. 50	5. 58	·1135					
9. 38	43. 55	6. 11	·1135					
10. 7	45. 5	6. 30	·1136					
11. 31	46. 0	7. 2	·1134					
11. 53	44. 50	7. 23	·1130					
12. 13	45. 40	7. 47	·1136					
12. 31	47. 20	8. 1	·1134					
13. 15	44. 50	8. 10	·1136					
13. 38	49. 0	8. 49	·1123					
14. 16	44. 45	9. 5	·1124					
14. 41	45. 25	9. 17	·1133					
15. 0	44. 5	10. 8	·1128					
15. 12	44. 40	10. 47	·1127					
15. 31	42. 5	11. 11	·1130					
15. 38	43. 15	11. 30	·1129					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 20		May 20						
h m	° ′ ″	h m		h m		h m		°
15. 56	20. 40. 40	11. 42	·1127					
16. 32	46. 55	12. 8	·1132					
16. 50	47. 25	12. 41	·1134					
17. 30	41. 20	13. 23	·1138					
17. 56	39. 25	13. 39	·1133					
18. 0	39. 40	13. 59	·1135					
18. 7	39. 5	14. 30	·1126					
18. 25	41. 40	14. 47	·1129					
18. 39	40. 35	14. 58	·1130					
18. 57	41. 20	15. 30	·1135					
19. 8	40. 55	15. 35	·1132					
19. 22	41. 25	15. 39	·1136					
	***	15. 58	·1128					
19. 57	41. 25	16. 12	·1128					
20. 13	39. 50	16. 38	·1123					
20. 21	40. 45	17. 4	·1131					
21. 24	41. 15		***					
21. 31	42. 5	17. 49	·1124					
21. 47	41. 50	18. 17	·1129					
22. 23	43. 55		***					
22. 24	42. 50	19. 8	·1125					
22. 25	46. 5	19. 20	·1125					
22. 43	45. 25	19. 24	·1129					
22. 59	47. 55	20. 10	·1122					
23. 47	49. 30	20. 19	·1119					
23. 59	51. 0	20. 38	·1118					
		20. 46	·1120					
		21. 4	·1117					
		21. 22	·1118					
		21. 47	·1114					
		22. 20	·1113					
		22. 47	·1116					
		23. 13	·1114					
		23. 15	·1103					
		23. 42	·1102					
		23. 52	·1104					
		23. 59	·1104					
May 21		May 21		May 21		May 21		
0. 0	20. 51. 0	0. 0	·1104	0. 0	·01560	0. 0	56 ·6	56 ·0
0. 39	52. 5	0. 8	·1104	1. 11	·01540	1. 0	57 ·1	56 ·1
1. 9	50. 30		(†)		·01780	2. 0	58 ·0	56 ·8
1. 47	51. 35	1. 0	·1098	3. 0	·01740	3. 0	59 ·0	58 ·0
1. 59	51. 25	1. 18	·1104	5. 12:	·01610	9. 0	58 ·6	57 ·0
2. 1	55. 10	1. 34	·1105	7. 23	·01587	21. 0	57 ·6	56 ·0
2. 40	54. 25	1. 39	·1108	9. 18	·01593			
2. 55	54. 55	1. 43	·1107	10. 17	·01575			
	(†)	1. 59	·1113	14. 10	·01727			
5. 19	48. 55	2. 14	·1105	15. 37	·01760			
7. 14	45. 25	2. 30	·1108	18. 22	·01767			
7. 30	40. 0	2. 53	·1107	18. 27	·01754			
7. 47	42. 5	3. 5	·1110	21. 23	·01754			
8. 0	41. 10	3. 15	·1108	23. 59	·01640			
8. 13	42. 10		***					
8. 22	44. 20	3. 46	·1114					
9. 16	44. 35	4. 14	·1111					
9. 26	45. 35	4. 17	·1105					
9. 34	44. 30	4. 43	·1110					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

May 21. From 1h. to 6h. workmen were engaged near the magnets.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 21		May 21						
h m	° ′ ″	h m		h m		h m	°	°
9. 45	20. 45. 10	4. 52	·1115					
10. 46	43. 55	5. 2	·1114					
11. 6	45. 35	5. 8	·1126					
11. 18	44. 50	5. 28	·1122					
11. 52	44. 50	6. 2	·1130					
12. 13	45. 25	6. 42	·1132					
12. 32	44. 15	6. 55	·1129					
12. 46	44. 40	7. 10	·1130					
13. 27	39. 50	7. 23	·1120					
13. 44	40. 0	7. 41	·1132					
14. 52	44. 25	8. 7	·1122					
15. 56	46. 25	8. 16	·1124					
16. 44	42. 50	8. 28	·1121					
17. 20	43. 25	8. 38	·1123					
17. 30	42. 45	9. 8	·1113					
18. 37	42. 5	9. 48	·1117					
19. 1	42. 30	10. 0	·1120					
19. 9	41. 25	10. 32	·1111					
19. 42	44. 10	11. 1	·1120					
19. 58	43. 5	11. 13	·1119					
20. 28	44. 15	12. 51	·1123					
21. 11	42. 55	13. 8	·1122					
	***	13. 23	·1124					
21. 34	46. 0	13. 44	·1121					
21. 45	44. 10	13. 50	·1119					
21. 47	40. 55	14. 27	·1118					
21. 52	44. 0	14. 52	·1121					
22. 10	44. 55	15. 25	·1120					
22. 15	44. 10	15. 44	·1126					
22. 59	46. 15	16. 8	·1129					
23. 31	49. 30	16. 38	·1125					
23. 55	49. 0	17. 27	·1125					
23. 59	49. 10	18. 28	·1126					
		18. 40	·1116					
			***					
		19. 29	·1108					
		19. 40	·1111					
		20. 0	·1102					
		20. 15	·1105					
		20. 38	·1104					
		20. 47	·1106					
		20. 57	·1105					
		21. 8	·1107					
		21. 33	·1107					
		21. 56	·1108					
		22. 20	·1107					
		22. 32	·1112					
		23. 17	·1115					
		23. 24	·1112					
		23. 37	·1114					
		23. 59	·1114					
May 22		May 22		May 22		May 22		
0. 0	20. 49. 10	0. 0	·1114	0. 0	·01640	1. 0	56·0	54·6
0. 57	50. 25	0. 13	·1113	2. 30	·01585	3. 0	57·0	55·6
3. 39	50. 25	0. 29	·1110	3. 25	·01600	9. 0	57·7	55·6
5. 30	48. 0	0. 47	·1116	4. 25	·01587	21. 0	49·8	49·0
5. 43	48. 20		(†)	6. 30	·01588			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 22		May 22		May 22				
h m	° ′ ″	h m		h m		h m	°	°
6. 6	20. 46. 55	1. 0	·1111*	10. 50	·01540			
6. 58	46. 0	1. 30	·1116	13. 45	·01650			
8. 23	46. 10	1. 41	·1114	15. 58	·01780			
8. 41	44. 40	1. 56	·1118	18. 35	·01780			
8. 48	45. 35	2. 8	·1117	21. 7	·01737			
9. 17	40. 25	2. 30	·1121	21. 55	·01763			
10. 0	43. 25	2. 38	·1116	23. 59	·01700			
10. 25	47. 30	3. 15	·1132					
11. 3	42. 0	3. 30	·1130					
11. 30	41. 10	3. 43	·1135					
12. 4	43. 0	3. 56	·1132					
13. 53	41. 55	4. 26	·1133					
14. 28	42. 55	4. 37	·1131					
15. 0	41. 10	4. 50	·1134					
15. 26	42. 0	5. 16	·1132					
15. 49	44. 55	5. 52	·1137					
16. 7	41. 55	6. 23	·1130					
16. 43	41. 5	6. 48	·1133					
16. 56	41. 45	7. 8	·1129					
17. 9	39. 55	7. 28	·1129					
17. 58	37. 50	7. 47	·1124					
18. 15	38. 15	8. 15	·1132					
18. 31	40. 40	9. 5	·1122					
18. 38	40. 0	9. 22	·1129					
18. 52	41. 10	9. 58	·1122					
19. 9	41. 45	10. 32	·1129					
19. 23	40. 45	10. 53	·1127					
20. 22	37. 55	11. 4	·1127					
20. 37	35. 50	11. 30	·1114					
20. 56	36. 25	12. 33	·1124					
21. 26	39. 40	12. 47	·1127					
22. 1	41. 15	13. 20	·1123					
23. 7	47. 20	13. 29	·1128					
23. 17	43. 15	13. 37	·1127					
23. 59	50. 45	14. 45	·1133					
		15. 11	·1130					
		15. 23	·1132					
		15. 40	·1133					
		15. 53	·1138					
		16. 52	·1132					
		17. 0	·1133					
		17. 57	·1123					
		18. 8	·1124					
		18. 20	·1122					
		18. 58	·1128					
		19. 38	·1127					
		20. 3	·1123					
		20. 44	·1123					
		21. 36	·1115					
		22. 14	·1118					
		22. 33	·1123					
		22. 54	·1126					
		23. 13	·1124					
		23. 35	·1128					
		23. 48	·1128					
		23. 59	·1133					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 23		May 23		May 23		May 23		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 50. 45	0. 0	·1133	0. 0	·01700	1. 0	54·6	53·8
0. 8	51. 35	0. 10	·1136	1. 27	·01623	3. 0	57·6	56·8
0. 21	51. 30	0. 21	·1137	1. 37	·01630	9. 0	61·4	58·6
0. 29	52. 55	0. 28	·1144	2. 22	·01592	22. 30	51·8	51·8
0. 37	52. 0	0. 35	·1142	3. 25	·01640			
0. 50	55. 15	0. 39	·1152	5. 9	·01640			
0. 58	53. 15	0. 56	·1126	6. 4	·01620			
1. 1	54. 50	1. 0	·1130	6. 24	·01638			
1. 27	50. 45	1. 5	·1126	6. 38	·01627			
1. 31	52. 5	1. 18	·1128	6. 42	·01640			
1. 43	50. 55	1. 27	·1124	6. 57	·01615			
2. 10	51. 25	1. 38	·1140	7. 24	·01617			
3. 2	54. 40	2. 26	·1148	7. 42	·01518			
3. 10	53. 50	2. 49	·1141	8. 4	·01634			
3. 25	54. 25	3. 10	·1154	8. 27:	·01540			
3. 35	53. 40	3. 18	·1149	8. 52	·01527			
3. 53	55. 5	3. 30	·1147	9. 7	·01500			
4. 15	54. 30	3. 40	·1142	11. 11	·01443			
4. 49	55. 50	4. 10	·1152	11. 38	·01455			
4. 59	54. 10	4. 22	·1150	12. 7:	·01410			
5. 3	55. 55	4. 38	·1159	12. 50	·01495			
5. 13	54. 45	4. 54	·1162	14. 25	·01567			
5. 20	55. 20	5. 4	·1152	14. 53:	·01554			
5. 26	54. 5	5. 13	·1166	15. 44	·01595			
5. 56	50. 45	5. 23	·1164	16. 30	·01663			
6. 3	51. 25	5. 30	·1156	20. 3	·01800			
6. 18	47. 0	5. 37	·1161	23. 14	·01840			
6. 27	47. 55	6. 0	·1136	23. 59	·01840			
6. 37	47. 35	6. 7	·1143					
6. 43	49. 0	6. 14	·1113					
7. 2	47. 40	6. 34	·1156					
7. 36	44. 15	6. 38	·1152					
7. 39	42. 10	6. 48	·1176					
7. 55	40. 55	7. 8	·1145					
8. 8	28. 30	7. 15	·1150					
8. 28	39. 10	7. 19	·1146					
8. 42	35. 55	7. 26	·1157					
8. 59	43. 5	7. 38	·1152					
9. 20	38. 40	7. 45	·1120					
9. 52	44. 10	7. 53	·1122					
10. 0	43. 25	7. 56	·1120					
10. 16	44. 10	8. 13	·1157					
10. 37	42. 40	8. 36	·1129					
10. 40	43. 5	8. 52	·1141					
10. 59	41. 50	9. 6	·1123					
11. 8	40. 0	9. 22	·1128					
11. 24	40. 10	9. 30	·1125					
11. 33	39. 20	9. 41	·1129					
11. 43	40. 30	10. 1	·1127					
11. 48	38. 50	10. 14	·1129					
11. 57	39. 25	10. 22	·1128					
12. 22	37. 40	11. 2	·1133					
12. 40	34. 5	11. 8	·1131					
12. 56	37. 30	11. 14	·1132					
13. 5	37. 25	11. 23	·1128					
13. 14	39. 35	11. 35	·1130					
13. 23	38. 50	11. 46	·1143					
13. 37	40. 0	12. 8	·1118					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 23		May 23				May 24		
h m	° ′ ″	h m		h m		h m	°	°
13. 56	20. 37. 5	12. 23	·1114			8. 0	62·0	60·0
14. 25	48. 15	12. 53	·1135			21. 0	54·2	53·6
15. 1	35. 35	13. 4	·1134					
15. 30	34. 20	13. 31	·1139					
15. 51	35. 10	13. 39	·1144					
16. 7	41. 5	13. 53	·1145					
16. 26	43. 0	13. 59	·1141					
16. 39	41. 55	14. 8	·1146					
16. 48	39. 25	14. 20	·1142					
		14. 29	·1148					
17. 10	40. 0	14. 52	·1153					
17. 43	43. 45	14. 59	·1150					
17. 56	42. 0	15. 17	·1156					
18. 8	43. 0	15. 59	·1143					
18. 37	42. 0	16. 3	·1145					
18. 45	42. 55	16. 9	·1142					
19. 3	40. 20	16. 28	·1151					
19. 30	41. 5	16. 52	·1150					
19. 45	39. 35	17. 5	·1143					
19. 50	40. 50	17. 30	·1139					
20. 1	39. 45	17. 45:	·1143					
20. 38	40. 50	18. 7	·1140					
21. 52	40. 20	18. 22	·1131					
22. 9	43. 55	18. 55	·1126					
22. 15	45. 0	19. 23	·1125					
23. 29	48. 0	19. 41	·1120					
23. 59	49. 40	19. 47	·1122					
		20. 0	·1118					
		20. 32	·1116					
		20. 44	·1114					
		20. 56	·1115					
		21. 9	·1112					
		21. 23	·1111					
		21. 30	·1113					
		21. 37	·1110					
		21. 45	·1112					
		22. 3	·1113					
		22. 12	·1118					
		22. 38	·1117					
		22. 51	·1118					
		23. 0	·1124					
		23. 20	·1122					
		23. 27	·1126					
		23. 59	·1126					
May 24		May 24		May 24				
0. 0	20. 49. 40	0. 0	·1126	0. 0	·01840			
0. 58	50. 0	0. 19	·1126	2. 53	·01720			
1. 46	49. 5	0. 46	·1130	3. 42	·01648			
2. 29	49. 20	1. 13	·1131	5. 4	·01625			
5. 46	45. 10	1. 25	·1134	8. 8	·01520			
6. 45	44. 45	1. 34	·1133		·01610			
9. 9	45. 40	1. 51	·1134	8. 55	·01560			
9. 52	44. 30	2. 7	·1132	11. 45	·01547			
11. 33	44. 0	2. 15	·1134	13. 36	·01594			
12. 39	42. 15	2. 39	·1131	18. 12	·01813			
12. 45	43. 25	2. 55	·1134	21. 6	·01830			
13. 18	43. 5	4. 16	·1137	22. 11	·01860			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 24		May 24		May 24				
h m	° ′ ″	h m		h m		h m	°	°
13. 23	20. 44. 45	4. 41	·1142	23. 59	·01850			
13. 39	40. 50	4. 52	·1140					
13. 46	41. 55	5. 20	·1142					
13. 58	40. 15	5. 33	·1140					
14. 0	42. 10	6. 8	·1142					
14. 8	40. 35	6. 53	·1139					
14. 13	41. 35	7. 15	·1143					
14. 29	41. 40	7. 23	·1142					
14. 34	40. 35	7. 32	·1144					
14. 48	39. 40	8. 8	·1134					
15. 7	41. 40	8. 46	·1135					
15. 37	38. 10	9. 0	·1138					
15. 55	41. 55	9. 9	·1135					
	***	9. 23	·1137					
17. 1	43. 0	9. 47	·1135					
17. 52	40. 0	10. 15	·1138					
18. 43	38. 15	10. 32	·1136					
19. 8	38. 45	11. 29	·1137					
19. 37	37. 50	11. 58	·1134					
20. 21	39. 20	12. 17	·1140					
20. 52	39. 20	12. 38	·1132					
21. 37	41. 15	12. 45	·1136					
22. 28	44. 30	12. 53	·1134					
23. 13	45. 40	13. 8	·1139					
23. 27	47. 35	13. 16	·1139					
23. 52	47. 30	13. 27	·1149					
23. 59	48. 15	13. 45	·1142					
		14. 24	·1144					
		14. 45	·1140					
		15. 8	·1144					
		15. 35	·1135					
		15. 53	·1133					
		16. 23	·1137					
		18. 44	·1130					
		18. 55	·1131					
		19. 25	·1129					
		19. 37	·1127					
		20. 37	·1128					
		21. 16	·1125					
		21. 32	·1127					
		22. 0	·1123					
		22. 38	·1121					
		23. 23	·1129					
		23. 46	·1122					
		23. 59	·1123					
May 25		May 25		May 25		May 25		
0. 0	20. 48. 15	0. 0	·1123	0. 0	·01850	1. 0	57·6	56·8
0. 27	49. 40	0. 4	·1126	0. 55	·01870	3. 0	59·8	58·6
0. 37	49. 5	0. 18	·1127	1. 53	·01810	9. 0	60·3	58·0
1. 42	52. 15	0. 27	·1125	3. 1	·01760	21. 0	51·8	51·5
3. 3	51. 5	0. 45	·1129	3. 45	·01660			
3. 12	51. 40	1. 0	·1130	5. 24	·01580			
3. 22	51. 10	1. 14	·1132	7. 3	·01543			
3. 43	51. 15	1. 32	·1138	9. 53	·01522			
4. 33	49. 5	1. 50	·1133	11. 40	·01555			
6. 37	46. 40	2. 10	·1136	17. 12	·01860			
7. 9	46. 35	2. 46	·1137	20. 45	·01846			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 25		May 25		May 25				
h m	° ′ ″	h m		h m		h m	°	°
8. 18	20. 46. 50	3. 8	·1161	22. 26	·01885			
8. 43	47. 30	3. 20	·1156	23. 59	·01837			
9. 1	46. 30	3. 39	·1156					
10. 21	45. 0	3. 57	·1149					
10. 58	45. 20	4. 12	·1152					
11. 15	43. 45	4. 20	·1152					
11. 23	44. 0	4. 52	·1157					
11. 44	43. 40	6. 11	·1158					
11. 52	44. 55	6. 38	·1152					
12. 11	43. 25	6. 47	·1153					
12. 16	44. 50	8. 1	·1141					
12. 23	43. 15	8. 23	·1141					
13. 24	44. 5	8. 39	·1145					
15. 2	43. 5	9. 32	·1134					
	***	9. 40	·1136					
16. 32	39. 55	10. 15	·1134					
16. 40	41. 10	10. 29	·1135					
16. 57	41. 55	10. 37	·1133					
17. 10	39. 40	11. 7	·1138					
17. 21	40. 25	11. 23	·1133					
17. 45	39. 40	11. 44	·1132					
18. 12	40. 50	11. 58	·1138					
18. 29	38. 20	12. 14	·1134					
18. 39	39. 55	12. 23	·1137					
18. 58	39. 30	12. 41	·1131					
19. 1	37. 10	13. 4	·1131					
19. 7	40. 35	13. 18	·1134					
19. 13	38. 30	13. 25	·1132					
19. 32	40. 5		***					
20. 0	39. 5	14. 53	·1132					
20. 9	40. 30	15. 7	·1136					
20. 27	39. 10	15. 13	·1136					
20. 30	40. 55	15. 44	·1142					
20. 42	38. 35	15. 53	·1137					
21. 5	44. 15	16. 0	·1141					
22. 13	47. 15	16. 14	·1138					
22. 22	50. 35	16. 23	·1142					
22. 39	48. 45	16. 29	·1140					
22. 45	49. 0		***					
22. 54	48. 25	18. 21	·1142					
22. 57	51. 5	18. 35	·1146					
23. 6	49. 20	18. 45	·1144					
23. 12	50. 45	18. 53	·1146					
23. 22	49. 25	19. 7	·1138					
23. 29	52. 35	19. 26	·1140					
23. 38	51. 10	19. 39	·1136					
23. 55	52. 3	19. 52	·1140					
23. 59	51. 0	20. 0	·1138					
		20. 26	·1135					
		20. 32	·1143					
		20. 39	·1133					
		20. 52	·1132					
		21. 7	·1126					
		21. 52	·1122					
		22. 4	·1126					
		22. 13	·1122					
		22. 26	·1132					
		22. 43	·1120					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 26	
0. 0	20. 51. 0
0. 26	52. 0
0. 34	51. 25
0. 37	53. 45
0. 53	51. 35
1. 0	53. 40
1. 7	52. 45
1. 18	57. 0
1. 36	52. 15
1. 50	52. 25
1. 58	52. 35
2. 16	53. 20
2. 38	50. 50
3. 5	51. 0
3. 15	50. 10
3. 37	52. 50
3. 58	51. 20
4. 14	47. 45
4. 23	49. 20
4. 49	47. 0
5. 13	46. 5
5. 19	47. 0
5. 52	44. 55
6. 13	44. 40
6. 46	45. 30
7. 34	44. 55
8. 23	47. 0
8. 52	46. 35
8. 57	44. 5
8. 58	47. 55
9. 0	46. 25
9. 13	46. 20
9. 16	47. 55
9. 30	45. 35
9. 35	46. 40
9. 53	45. 35
10. 27	46. 35
10. 52	44. 30
11. 0	46. 0
11. 6	45. 0
11. 10	46. 30
11. 25	44. 20
	***
14. 10	44. 40
14. 23	43. 40
14. 28	46. 0
14. 39	44. 5
14. 55	47. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 25	
h m	
22. 58	·1124
23. 2	·1129
23. 9	·1124
23. 17	·1130
23. 36	·1131
23. 43	·1123
23. 54	·1123
23. 59	·1121
May 26	
0. 0	·1121
0. 12	·1115
0. 29	·1124
0. 32	·1121
0. 42	·1122
1. 0	·1116
1. 13	·1128
1. 17	·1125
1. 34	·1153
1. 45	·1128
2. 9	·1125
	***
2. 48	·1127
3. 14	·1136
3. 26	·1135
3. 51	·1165
4. 0	·1169
4. 4	·1164
4. 7	·1166
4. 23	·1138
4. 34	·1145
5. 7	·1134
5. 23	·1143
5. 52	·1140
6. 20	·1146
6. 33	·1144
6. 42	·1146
6. 58	·1141
7. 51	·1140
8. 7	·1143
8. 18	·1136
9. 7	·1131
9. 19	·1136
9. 25	·1125
9. 38	·1134
9. 45	·1130
10. 24	·1132
10. 32	·1130
10. 50	·1130
10. 59	·1133
11. 4	·1128
11. 10	·1137
11. 22	·1131
11. 34	·1133
11. 45	·1131
	***
12. 54	·1134
13. 58	·1132
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 26	
0. 0	·01837
0. 55	·01814
1. 9	·01820
1. 24	·01850
3. 42	·01750
4. 23	·01670
5. 20	·01660
9. 48	·01540
10. 34	·01540
11. 45	·01534
12. 47	·01580
17. 43	·01870
21. 18	·01870
22. 15	·01905
23. 59	·01880

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 26		
1. 0	54·8	54·2
3. 0	57·0	56·6
9. 0	61·0	59·0
21. 0	52·2	52·0
22. 0	53·2	53·0
23. 0	55·0	55·0

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 26	
15. 0	20. 46. 5
15. 13	47. 35
15. 20	45. 5
15. 37	46. 55
16. 7	44. 45
16. 18	46. 10
16. 45	42. 50
17. 4	42. 30
17. 33	45. 0
	***
18. 18	41. 15
18. 30	43. 40
18. 37	46. 55
18. 49	43. 50
19. 10	41. 35
19. 13	43. 0
19. 22	41. 0
19. 26	42. 55
19. 29	40. 25
19. 40	41. 35
19. 52	40. 40
19. 56	42. 10
20. 0	40. 0
20. 2	42. 10
20. 8	39. 0
20. 9	40. 45
20. 22	41. 40
20. 25	40. 5
20. 30	41. 25
20. 37	40. 25
20. 41	41. 55
20. 56	41. 45
21. 38	46. 0
21. 53	46. 0
22. 4	44. 40
22. 15	48. 35
22. 23	47. 50
22. 43	49. 20
22. 58	49. 0
23. 12	51. 15
23. 43	49. 30
23. 56	51. 10
	(†)
May 27	
	(†)
0. 8	20. 49. 45
0. 30	50. 35
0. 38	52. 30
0. 42	51. 50
0. 45	52. 55
1. 0	51. 5
1. 32	50. 40
2. 4	52. 5
2. 18	50. 50
2. 33	51. 25
	***
3. 21	49. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 26	
h m	
15. 8	·1130
15. 14	·1126
15. 28	·1127
15. 39	·1124
16. 3	·1127
16. 15	·1132
16. 24	·1129
16. 47	·1134
17. 0	·1134
17. 16	·1128
17. 31	·1131
	***
17. 55	·1125
18. 0	·1127
18. 24	·1117
18. 30	·1120
18. 53	·1119
18. 58	·1122
19. 6	·1117
19. 20	·1123
19. 26	·1121
19. 40	·1122
19. 45	·1117
19. 51	·1124
19. 55	·1119
19. 58	·1125
20. 12	·1120
20. 30	·1122
21. 25	·1105
21. 44	·1092
22. 0	·1093
22. 11	·1089
22. 37	·1099
22. 54	·1094
23. 15	·1094
23. 42	·1107
	(†)
May 27	
	(†)
0. 11	·1105
0. 29	·1117
0. 33	·1115
0. 38	·1118
0. 42	·1114
0. 46	·1120
1. 0	·1112
1. 28	·1123
2. 24	·1130
2. 39	·1134
2. 54	·1131
3. 8	·1137

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 27	
0. 0	·01880
2. 7	·01765
2. 41	·01686
3. 58	·01650
4. 38	·01610
	·01660
6. 9	·01590
6. 15	·01630
7. 26	·01570
7. 57	·01567
8. 28	·01545
	·01630
10. 43	·01570

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 27		
0. 0	56·2	56·2
1. 0	57·5	57·7
3. 0	61·1	62·0
6. 0	65·5	64·0
9. 0	66·0	64·2
12. 0	64·6	62·4
18. 0	60·8	58·7
21. 0	59·0	58·8
22. 0	59·9	59·6
23. 0	60·8	61·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 27		May 27		May 27				
h m	° ′ ″	h m		h m		h m		
3. 28	20. 49. 30	3. 22	·1132	15. 26	·01688			
3. 37	47. 25	4. 7	·1130	17. 38:	·01780			
3. 43	48. 30	4. 55	·1138	20. 7	·01947			
4. 2	46. 35	5. 15	·1133	22. 48	·01980			
4. 38	46. 20	5. 45	·1140	23. 59	·01937			
4. 52	46. 55	5. 58	·1136					
4. 57	47. 50	6. 8	·1138					
5. 12	46. 0	6. 37	·1133					
6. 39	45. 10	6. 52	·1144					
6. 54	45. 50	7. 7	·1135					
7. 7	44. 55	7. 31	·1133					
7. 38	44. 55	7. 57	·1143					
7. 50	45. 55	8. 22	·1131					
8. 8	44. 0	8. 35	·1132					
8. 24	44. 0	9. 29	·1122					
8. 32	45. 30	10. 29	·1128					
8. 52	44. 55	10. 45	·1123					
8. 56	42. 0	10. 57	·1125					
9. 0	43. 50	11. 29	·1122					
9. 24	44. 35	12. 16	·1127					
9. 33	45. 35	12. 37	·1124					
9. 39	44. 35	12. 41	·1127					
10. 22	45. 5	13. 3	·1121					
10. 28	46. 10	13. 18	·1121					
10. 45	44. 25	13. 57	·1124					
11. 21	43. 55	14. 9	·1121					
12. 6	45. 10	15. 47	·1121					
12. 30	44. 15	16. 5	·1123					
12. 33	45. 40	16. 23	·1121					
12. 38	44. 15	18. 17	·1120					
12. 45	44. 50	18. 37	·1114					
12. 59	43. 25	19. 45	·1110					
13. 59	45. 55	20. 0	·1112					
15. 7	45. 0	20. 38	·1106					
15. 16	45. 20	21. 32	·1106					
15. 53	43. 5	22. 19	·1097					
16. 34	42. 0	22. 31	·1100					
16. 44	42. 45	22. 38	·1092					
16. 50	41. 0	23. 12	·1096					
16. 59	42. 5	23. 45	·1114					
17. 6	41. 45	23. 55	·1113					
17. 45	41. 25	23. 59	·1112					
17. 55	42. 10							
18. 0	41. 5							
18. 10	41. 10							
18. 14	40. 0							
18. 22	41. 55							
18. 32	40. 5							
18. 43	42. 55							
18. 50	42. 0							
19. 0	41. 45							
19. 5	40. 35							
19. 23	42. 35							
19. 33	40. 20							
19. 48	41. 35							
20. 8	42. 30							
20. 15	41. 30							
20. 50	42. 55							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 27								
h m	° ′ ″	h m		h m		h m		
21. 47	20. 46. 0							
22. 8	50. 20							
22. 53	52. 25							
23. 29	52. 30							
23. 37	54. 20							
23. 53	54. 40							
	(†)							
May 28		May 28		May 28		May 28		
	(†)	0. 0	·1112	0. 0	·01937	0. 0	61 ·9	63 ·0
0. 7	20. 52. 50	0. 8	·1113	0. 15	·01950	1. 0	62 ·8	64 ·0
1. 1	51. 10	0. 35	·1120	2. 9	·01803	2. 0	63 ·8	65 ·8
1. 15	52. 10	1. 3	·1126	3. 39	·01600	3. 0	65 ·7	67 ·6
1. 32	52. 50	1. 8	·1123	3. 58	{·01595	9. 0	70 ·0	69 ·0
1. 45	51. 30	1. 30	·1135		{·01660	21. 0	62 ·0	61 ·2
1. 52	52. 10	1. 38	·1125	6. 4	·01513			
2. 37	51. 55	2. 8	·1125	8. 26	·01464			
3. 1	49. 35	2. 36	·1136	10. 58	·01440			
3. 47	47. 50	2. 52	·1131	14. 3	·01544			
3. 57	48. 45	3. 8	·1133	15. 34:	·01597			
5. 42	44. 25	3. 41	·1125	16. 45	·01700			
5. 48	45. 35	3. 53	·1130	18. 0	·01795			
6. 28	44. 15	4. 3	·1126	21. 0	·01837			
6. 53	44. 10	4. 16	·1125	22. 49	·01880			
7. 22	45. 40	4. 31	·1136	23. 0	·01885			
7. 54	45. 10	4. 51	·1133	23. 22	·01873			
8. 30	46. 0	5. 8	·1121	23. 59	·01880			
8. 46	44. 35	5. 35	·1122					
9. 56	43. 35	5. 47	·1128					
10. 37	44. 35	6. 0	·1127					
10. 46	43. 55	6. 20	·1132					
10. 52	45. 0	6. 47	·1136					
11. 1	44. 10	6. 52	·1132					
11. 37	44. 50	6. 58	·1139					
12. 30	44. 30	7. 8	·1132					
12. 38	43. 40		***					
13. 11	43. 10	8. 13	·1130					
14. 19	53. 0	8. 19	·1131					
14. 42	49. 15	8. 39	·1126					
14. 57	49. 0	8. 50	·1129					
15. 26	43. 30	9. 4	·1127					
16. 22	39. 5	9. 28	·1128					
16. 27	41. 15	10. 0	·1121					
16. 33	39. 0	10. 22	·1126					
17. 6	38. 30	10. 44	·1121					
17. 31	37. 35		***					
18. 7	38. 30	11. 37	·1121					
18. 21	37. 20	11. 44	·1124					
18. 40	38. 20	11. 54	·1122					
18. 57	39. 55	12. 5	·1124					
19. 30	37. 40	12. 23	·1120					
19. 52	39. 0	12. 32	·1122					
20. 19	38. 45	13. 0	·1119					
21. 38	42. 40	13. 35	·1122					
21. 58	46. 55	14. 10	·1113					
22. 13	47. 5	14. 29	·1118					
22. 23	48. 45	14. 41	·1117					
22. 39	48. 55		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 28		May 28						
h m	° ′ ″	h m		h m		h m	°	°
22. 37	20. 50. 0	15. 26	·1126					
23. 7	49. 25	15. 59	·1121					
23. 31	50. 0	16. 30	·1120					
23. 38	51. 0	16. 35	·1117					
23. 50	49. 25	17. 11	·1121					
23. 59	50. 40	17. 28	·1116					
		17. 45	·1118					
		18. 22	·1112					
		19. 18	·1114					
		19. 29	·1112					
		19. 44	·1115					
		20. 28	·1110					
		20. 43	·1112					
		21. 30	·1106					
		21. 38	·1103					
		21. 52	·1102					
		22. 13	·1089					
		22. 38	·1090					
		23. 11	·1097					
		23. 46	·1115					
		23. 59	·1112					
May 29		May 29		May 29		May 29		
0. 0	20. 50. 40	0. 0	·1112	0. 0	·01880	1. 0	66 ·0	67 ·1
0. 20	50. 50	0. 21	·1111	0. 23	·01880	3. 0	69 ·1	70 ·9
0. 49	50. 0		***	1. 7	·01852	9. 0	74 ·0	72 ·0
1. 1	51. 40	1. 4	·1128	1. 28	·01790	21. 0	65 ·8	65 ·0
1. 29	48. 55	1. 22	·1124	3. 50	·01515			
1. 36	50. 30	1. 30	·1117	4. 39	·01443			
1. 46	50. 5	1. 37	·1126	8. 53	·01280			
2. 2	49. 0	1. 50	·1117	9. 18	·01300			
2. 14	48. 15	2. 4	·1123	10. 4	·01240			
2. 57	48. 40	2. 26	·1114	11. 41	·01267			
3. 3	50. 0	2. 43	·1115	15. 33	·01300			
3. 37	47. 25	2. 57	·1126	17. 3	·01637			
4. 0	44. 25	3. 23	·1124	19. 18	·01740			
4. 12	44. 25	3. 37	·1117	21. 15	·01740			
4. 25	45. 30	3. 51	·1115	23. 36	·01758			
4. 44	44. 45	4. 23	·1133	23. 59	·01780			
5. 26	47. 30	4. 40	·1125					
5. 52	46. 0	4. 58	·1122					
5. 57	46. 30	5. 24	·1138					
6. 31	44. 35	5. 49	·1118					
6. 44	46. 0	5. 57	·1126					
7. 15	46. 30	6. 4	·1121					
7. 31	47. 35	6. 30	·1116					
7. 56	47. 15	6. 44	·1125					
8. 42	48. 0	7. 5	·1120					
8. 53	46. 15	7. 19	·1123					
9. 0	47. 35	7. 30	·1121					
9. 38	47. 0	7. 48	·1124					
9. 47	45. 45	8. 9	·1121					
10. 2	45. 45	8. 17	·1124					
10. 22	42. 35	9. 8	·1118					
10. 31	43. 0	9. 22	·1120					
10. 58	42. 55	9. 35	·1119					
11. 23	46. 35	9. 51	·1124					
11. 45	45. 15	10. 8	·1117					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 29		May 29						
h m	° ′ ″	h m		h m		h m	°	°
12. 13	20. 46. 50	10. 32	·1114					
12. 44	45. 20	11. 17	·1115					
13. 0	47. 10	11. 34	·1113					
13. 25	47. 10	12. 2	·1113					
13. 44	46. 0	12. 33	·1111					
13. 59	47. 45	13. 17	·1113					
14. 15	47. 25	13. 49	·1107					
14. 28	46. 15	13. 58	·1110					
14. 43	47. 40	14. 10	·1107					
15. 5	47. 25	14. 22	·1111					
15. 14	44. 5	14. 32	·1110					
15. 19	45. 0	14. 47	·1114					
15. 25	44. 0	15. 16	·1110					
15. 38	45. 25	15. 23	·1115					
16. 12	45. 0	15. 38	·1108					
16. 23	46. 15	15. 48	·1110					
16. 29	44. 30	16. 38	·1110					
16. 44	45. 5	16. 49	·1113					
17. 6	43. 50	18. 6	·1109					
17. 30	44. 25	18. 21	·1111					
17. 46	43. 50	18. 37	·1105					
17. 55	44. 55	19. 0	·1107					
	***	19. 15	·1105					
18. 37	45. 10	19. 27	·1107					
18. 59	46. 55	19. 46	·1104					
19. 25	47. 25	20. 58	·1105					
19. 31	48. 25	21. 7	·1107					
19. 48	47. 0	21. 15	·1106					
20. 17	48. 5	21. 46	·1105					
20. 28	47. 30	22. 8	·1103					
20. 51	48. 40	22. 18	·1099					
21. 0	47. 45	22. 42	·1105					
	***	23. 0	·1102					
22. 12	53. 10	23. 23	·1107					
22. 33	52. 0	23. 30	·1101					
22. 51	52. 40	23. 47	·1107					
23. 0	52. 10	23. 55	·1103					
	***	23. 59	·1106					
23. 43	54. 0							
23. 53	53. 5							
23. 59	52. 35							
May 30		May 30		May 30		May 30		
0. 0	20. 52. 35	0. 0	·1106	0. 0	·01780	1. 0	67 ·0	68 ·2
0. 13	53. 20	0. 41	·1117	0. 38	·01795	3. 0	68 ·8	69 ·9
0. 36	54. 15	0. 59	·1108	4. 3	·01600	9. 0	70 ·4	69 ·4
0. 57	52. 50	1. 7	·1113	5. 10	·01485	22. 36	64 ·0	63 ·0
1. 2	53. 55	1. 49	·1107	6. 40	·01510			
1. 45	53. 5	2. 10	·1114	9. 36	·01500			
1. 57	53. 30	2. 15	·1122	10. 11	·01485			
2. 7	53. 0	2. 19	·1118	12. 3	·01540			
2. 10	54. 0	2. 52	·1105	14. 40	·01654			
2. 22	52. 5	3. 1	·1107	15. 18	·01650			
2. 31	52. 20	3. 23	·1109	17. 42	·01788			
3. 38	49. 40	3. 33	·1106	23. 59	·01595			
4. 8	49. 25	3. 58	·1106					
4. 37	48. 0	4. 9	·1109					
5. 0	48. 15	4. 23	·1110					
5. 12	47. 5	4. 30	·1114					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 30		May 30						
h m	° ′ ″	h m		h m		h m	°	°
6. 7	20. 46. 0	4. 39	·1111					
6. 21	42. 35	5. 0	·1122					
6. 32	40. 50	5. 13	·1118					
7. 2	41. 35	5. 20	·1121					
7. 26	43. 45	5. 37	·1115					
7. 37	45. 30	5. 53	·1124					
8. 11	45. 20	6. 0	·1113					
8. 46	46. 20	6. 2	·1124					
8. 59	45. 10	6. 18	·1119					
9. 15	46. 35	6. 37	·1130					
9. 52	46. 25	7. 0	·1133					
10. 20	45. 0	7. 30	·1130					
10. 28	46. 0	7. 47	·1125					
10. 49	40. 45	8. 7	·1128					
11. 15	47. 55	8. 20	·1126					
11. 32	48. 25	8. 43	·1130					
11. 43	47. 0	9. 0	·1126					
12. 7	46. 5	9. 10	·1133					
12. 22	46. 35	9. 15	·1130					
12. 29	45. 35	9. 43	·1132					
12. 31	46. 55	9. 58	·1128					
12. 59	46. 5	10. 12	·1130					
13. 8	47. 0	10. 40	·1126					
13. 22	46. 0	10. 56	·1132					
13. 28	47. 5	11. 10	·1130					
13. 45	47. 40		***					
13. 59	47. 35	11. 47	·1132					
14. 11	50. 0		***					
14. 16	49. 50	12. 36	·1125					
14. 29	51. 35	12. 40	·1129					
15. 13	46. 50	13. 0	·1126					
15. 41	45. 20	13. 7	·1129					
16. 0	45. 55	13. 17	·1127					
16. 26	43. 35	13. 33	·1128					
16. 46	44. 30	13. 49	·1124					
17. 10	42. 45	14. 8	·1127					
17. 18	44. 5	14. 17	·1127					
17. 28	43. 5	15. 0	·1126					
17. 30	44. 30	15. 33	·1123					
17. 47	43. 35	16. 8	·1130					
17. 58	45. 15	16. 42	·1130					
18. 24	45. 0		***					
18. 52	43. 20	17. 15	·1123					
19. 22	45. 40	17. 37	·1124					
19. 43	44. 10	18. 25	·1121					
20. 15	43. 10	18. 39	·1115					
20. 28	41. 50	19. 10	·1122					
20. 36	43. 15		***					
20. 50	42. 50	19. 59	·1116					
20. 59	44. 10		***					
21. 10	43. 15	20. 57	·1122					
21. 16	45. 0	21. 3	·1120					
21. 22	44. 0		***					
	***	21. 47	·1113					
21. 59	48. 5		***					
22. 24	49. 40	22. 16	·1111					
22. 33	49. 0	22. 40	·1118					
22. 35	50. 35	22. 45	·1110					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 30		May 30						
h m	° ′ ″	h m		h m		h m	°	°
23. 10	20. 51. 40	22. 49	·1112					
23. 43	53. 0	22. 55	·1109					
23. 52	52. 5	23. 8	·1110					
23. 59	52. 40	23. 20	·1113					
		23. 57	·1102					
		23. 59	·1105					
May 31		May 31		May 31		May 31		
0. 0	20. 52. 40	0. 0	·1105	0. 0	·01595	9. 50	62 ·5	62 ·0
0. 16	53. 10	0. 28	·1113	3. 15	·01653	21. 0	55 ·8	56 ·0
0. 23	52. 40	0. 47	·1127	7. 23	·01647			
0. 43	54. 15	1. 32	·1112	10. 44	·01590			
0. 59	54. 30	2. 8	·1124	10. 56	·01575			
1. 8	53. 50	2. 25	·1124	12. 14	·01555			
1. 18	55. 0	2. 39	·1118	12. 44	·01530			
1. 29	54. 10	2. 43	·1122		·01440			
2. 10	54. 0	2. 58	·1120	15. 30	·01566			
2. 34	52. 35	3. 11	·1129	16. 45	·01542			
2. 39	53. 25	3. 21	·1126		·01496			
2. 53	52. 0	3. 30	·1126	18. 40	·01560			
3. 0	52. 55	3. 47	·1117	19. 22	·01545			
4. 0	49. 15	4. 44	·1134		·01490			
5. 15	47. 35	5. 15	·1124	23. 59	·01495			
5. 38	47. 35	5. 38	·1131					
6. 8	46. 0	6. 15	·1130					
6. 37	46. 30	7. 15	·1136					
6. 56	46. 0	7. 52	·1135					
7. 59	47. 30	8. 6	·1137					
8. 32	47. 25	8. 32	·1133					
8. 52	48. 0	8. 52	·1135					
9. 27	47. 15	9. 2	·1133					
9. 37	48. 55	9. 28	·1132					
9. 48	46. 25	9. 44	·1136					
9. 53	48. 15	10. 5	·1133					
10. 8	47. 5	10. 15	·1135					
10. 19	48. 0	10. 26	·1133					
10. 30	47. 5	10. 46	·1137					
10. 33	48. 5	11. 15	·1140					
10. 46	46. 55	11. 30	·1134					
11. 33	46. 5		***					
11. 44	47. 0	12. 17	·1142					
11. 52	46. 20	12. 40	·1139					
12. 3	49. 0	12. 53	·1135					
12. 18	50. 0	13. 15	·1132					
12. 37	46. 45	13. 57	·1136					
12. 54	45. 15	14. 8	·1134					
14. 1	45. 40	14. 38	·1135					
14. 16	44. 25	14. 51	·1133					
14. 39	45. 30	15. 24	·1135					
14. 54	44. 20	16. 1	·1133					
15. 5	45. 0		(†)					
15. 37	44. 35	17. 36	·1129					
15. 44	45. 15	17. 48	·1127					
16. 1	44. 25	18. 18	·1133					
	(†)	19. 15	·1132					
17. 36	44. 0	20. 7	·1131					
17. 43	44. 15	20. 20	·1127					
17. 47	43. 0	21. 23	·1122					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

May 31. The Declination and Horizontal Force cylinder was stopped from $16^h.\ 1^m.$ to $17^h.\ 36^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 31		May 31						
h m	° ′ ″	h m		h m		h m	°	°
18. 0	20. 44. 10	21. 43	·1123					
18. 13	43. 35	21. 52	·1121					
18. 21	42. 35	22. 16	·1120					
18. 27	43. 10	22. 34	·1124					
18. 55	41. 0	22. 51	·1125					
19. 10	40. 45	23. 15	·1128					
19. 20	42. 5	23. 23	·1126					
19. 43	41. 50	23. 59	·1127					
19. 53	42. 45							
20. 17	42. 0							
20. 22	43. 15							
20. 38	44. 0							
20. 48	43. 50							
21. 3	46. 0							
21. 23	46. 10							
21. 37	48. 10							
22. 0	49. 50							
22. 9	49. 15							
22. 32	49. 50							
22. 35	50. 55							
22. 58	51. 20							
23. 15	52. 50							
23. 26	52. 30							
23. 59	53. 35							
June 1		June 1		June 1		June 1		
0. 0	20. 53. 35	0. 0	·1127	0. 0	·01495	1. 0	59 ·8	60 ·0
0. 17	55. 25	0. 18	·1134	1. 5	{·01530	3. 0	62 ·6	63 ·0
1. 4	53. 5	0. 39	·1128		{·01747	9. 0	66 ·0	63 ·0
1. 38	54. 0	0. 45	·1124	2. 38:	·01700	21. 0	57 ·0	56 ·5
2. 15	52. 25	1. 6	·1122	3. 37	·01590			
2. 33	52. 50	1. 38	·1141		(†)			
3. 2	51. 5	2. 20	·1127	8. 41	·01390			
3. 8	52. 0	2. 48	·1140	11. 33	·01440			
3. 27	49. 45	3. 1	·1131	14. 39	·01660			
3. 34	50. 5	3. 8	·1139	20. 3	·01566			
	(†)	3. 17	·1130	21. 30	·01576			
8. 37	45. 15	3. 32	·1129	22. 19	·01593			
8. 42	44. 50		(†)	23. 7	01566			
8. 48	46. 35	9. 0	·1134*	23. 59	·01540			
9. 1	43. 10	13. 15	·1133					
9. 10	45. 55	13. 40	·1134					
9. 27	44. 0	14. 9	·1138					
9. 50	43. 10	14. 52	·1138					
10. 6	44. 20	15. 13	·1136					
11. 7	45. 5	16. 58	·1140					
11. 24	44. 5	17. 36	·1138					
12. 22	43. 55	18. 8	·1139					
12. 59	44. 30	20. 8	·1126					
13. 34	43. 25	22. 14	·1116					
14. 16	45. 5		(†)					
	***	22. 55	·1109					
15. 12	43. 55	23. 17	·1111					
	***	23. 59	·1119					
15. 41	44. 0							
16. 14	42. 0							
16. 47	43. 0							
17. 45	39. 10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 1								
h m	° ′ ″	h m		h m		h m	°	°
18. 42	20. 38. 50							
18. 46	39. 50							
18. 55	38. 25							
19. 35	39. 10							
19. 42	39. 0							
21. 31	40. 35							
22. 26	46. 5							
23. 36	50. 30							
23. 59	50. 45							
June 2		June 2		June 2		June 2		
0. 0	20. 50. 45	0. 0	·1119	0. 0	·01540	1. 0	63 ·0	62 ·8
0. 8	50. 0	1. 8	·1136	1. 19	·01492	3. 0	66 ·9	66 ·7
0. 15	50. 55	1. 18	·1144	1. 41	·01445	9. 0	71 ·5	69 ·7
0. 43	51. 10	1. 38	·1136	3. 22	·01507	21. 0	62 ·2	62 ·0
1. 17	53. 0	1. 53	·1137	4. 13	·01513	22. 0	63 ·6	64 ·0
1. 29	52. 0	2. 4	·1142	6. 13	·01453	23. 0	65 ·1	65 ·9
2. 0	53. 15	2. 15	·1138	7. 34	·01440			
2. 15	52. 30	2. 46	·1147	9. 3	·01373			
2. 27	53. 20	2. 55	·1145	10. 55	·01334			
2. 36	52. 10	3. 37	·1148	11. 56	·01340			
2. 40	53. 10	3. 47	·1156	13. 24	·01406			
3. 23	51. 40	4. 9	·1156	16. 42	·01645			
3. 51	51. 0		(†)	19. 30	·01735			
4. 40	48. 15	4. 45	·1120	22. 9	·01780			
4. 47	48. 40	4. 56	·1124	23. 19	·01620			
5. 3	46. 55	5. 8	·1121	23. 59	·01587			
5. 16	46. 40	5. 30	·1124					
6. 5	45. 0	5. 43	·1122					
6. 38	44. 55	6. 28	·1124					
7. 3	44. 55	6. 47	·1129					
7. 22	43. 25	7. 47	·1113					
7. 28	43. 50	8. 0	·1115					
8. 7	43. 5	8. 27	·1114					
8. 33	43. 10	8. 38	·1107					
8. 42	41. 55	8. 51	·1117					
8. 48	43. 0	9. 4	·1111					
9. 4	43. 30	9. 13	·1112					
9. 24	42. 55	9. 40	·1108					
9. 40	43. 20	10. 10	·1116					
9. 47	44. 20	10. 45	·1115					
10. 1	42. 55	10. 59	·1118					
10. 20	42. 0	11. 35	·1113					
10. 50	42. 30	12. 40	·1115					
10. 58	43. 10	13. 2:	·1110					
11. 28	42. 10	13. 21	·1114					
12. 29	42. 45	13. 26	·1112					
12. 39	41. 40	13. 46	·1114					
12. 43	42. 55	14. 19	·1108					
12. 59	41. 10	14. 35	·1111					
14. 7	45. 25	14. 49	·1109					
14. 45	45. 55	15. 23	·1114					
15. 12	45. 0	15. 34	·1112					
15. 17	46. 25		***					
15. 36	44. 20	17. 53	·1110					
15. 47	44. 45	18. 3	·1111					
16. 7	42. 30	18. 32	·1106					
16. 16	44. 0	18. 59	·1105					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 1. The photographic trace of the Declination Magnet was lost from $3^h.\ 34^m.$ to $8^h.\ 37^m.$, and that of the Horizontal Force was lost from $3^h.\ 32^m.$ to $13^h.\ 15^m.$

Greenwich Mean Solar Time.	Western Declination.
June 2	
h m	° ′ ″
16. 24	20. 41. 30
16. 28	43. 35
16. 34	41. 55
17. 1	43. 0
17. 10	42. 0
17. 20	43. 20
17. 35	41. 10
17. 59	42. 15
18. 8	41. 0
18. 20	40. 30
18. 52	39. 55
19. 16	40. 45
19. 38	40. 0
20. 16	40. 5
20. 21	40. 40
21. 0	40. 45
21. 31	43. 25
22. 35	45. 15
22. 54	44. 5
23. 45	47. 10
23. 59	47. 5
June 3	
0. 0	20. 47. 5
0. 9	48. 25
0. 26	47. 55
0. 36	49. 40
0. 55	49. 55
1. 0	48. 0
1. 6	50. 0
1. 45	51. 10
2. 34	50. 35
2. 45	50. 5
3. 48	48. 30
3. 59	48. 40
5. 30	45. 25
6. 11	44. 55
6. 43	45. 25
7. 41	44. 5
8. 53	45. 0
9. 29	44. 5
10. 39	43. 55
11. 7	43. 50
11. 41	44. 30
12. 37	43. 10
12. 51	44. 5
13. 23	43. 15
13. 38	44. 30
13. 47	44. 5
14. 0	45. 5
14. 21	45. 35
14. 33	45. 0
15. 7	48. 55
15. 49	47. 30
16. 25	39. 30
16. 48	39. 0
16. 54	39. 30
17. 0	38. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 2	
h m	
19. 12	·1103
19. 53	·1104
20. 44	·1101
20. 55	·1101
21. 15	·1094
21. 31	·1093
22. 1	·1098
22. 23	·1094
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June 3	
0. 0	·01587
1. 0	·01520
	·01633
3. 25	·01440
	·01540
4. 9	·01405
4. 43	·01360
	·01440
5. 49	·01320
	·01435
7. 38	·01305
7. 45	·01306
	·01450
10. 22	·01405
11. 25	·01460
12. 56	·01566
14. 57	·01620
16. 15	·01590
21. 6	·01560
	·01414
22. 22	·01430
	·01360
23. 5	·01420
23. 59	·01420

Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
h m	°	°
June 3		
0. 0	66 ·9	67 ·9
1. 0	69 ·0	70 ·0
3. 0	75 ·5	73 ·8
6. 0	77 ·0	76 ·0
9. 0	76 ·5	76 ·4
12. 0	74 ·0	73 ·0
18. 0	69 ·0	68 ·6
21. 0	67 ·5	67 ·0
22. 0	68 ·1	67 ·6
23. 0	68 ·9	67 ·9

Greenwich Mean Solar Time.	Western Declination.
June 3	
h m	° ′ ″
17. 8	20. 39. 10
17. 14	38. 30
17. 53	37. 55
18. 8	36. 10
18. 23	37. 0
18. 38	35. 15
18. 51	36. 40
19. 1	36. 55
19. 17	34. 30
19. 22	35. 0
19. 27	34. 20
19. 32	35. 10
19. 41	34. 35
19. 45	35. 30
19. 54	35. 10
20. 15	38. 5
20. 21	36. 30
20. 29	38. 0
20. 33	37. 0
20. 52	39. 0
21. 6	39. 15
21. 38	42. 0
22. 0	41. 40
22. 6	42. 0
	(†)
June 4	
	(†)
0. 51	20. 50. 0
1. 15	51. 20
2. 8	50. 40
2. 48	51. 5
4. 3	49. 25
4. 11	50. 0
4. 19	48. 50
4. 36	50. 0
5. 13	47. 10
5. 38	47. 20
6. 10	43. 10
6. 44	46. 55
6. 57	46. 5
	***
7. 49	46. 40
8. 16	44. 15
8. 20	43. 5
8. 52	43. 20
9. 0	41. 30
9. 18	45. 35
9. 49	43. 10
10. 38	44. 10
11. 39	42. 5
11. 58	43. 0
12. 22	42. 0
12. 46	43. 0
13. 9	48. 55
13. 33	43. 0
13. 44	42. 15
13. 57	44. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
June 4	
0. 0	·1078
0. 12	·1081
0. 48	·1074
0. 54	·1067
1. 17	·1069
1. 28	·1062
1. 42	·1063
1. 50	·1070
1. 59	·1067
2. 8	·1075
2. 15	·1071
2. 27	·1082
2. 32	·1079
2. 47	·1079
2. 56	·1073
3. 30	·1077
3. 45	·1086
3. 58	·1082
4. 4	·1080
4. 35	·1115
4. 46	·1099
4. 52	·1099
5. 13	·1084
	***
5. 20	·1092
5. 48	·1104
6. 2	·1100
6. 17	·1108
6. 25	·1098
6. 29	·1102
6. 40	·1083

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June 4	
0. 0	·01420
0. 24	·01427
1. 0	·01447
3. 31	·01280
4. 23	·01280
4. 41	·01320
4. 56	·01300
	***
6. 18	·01340
	***
8. 21	·01300
9. 49	·01330
12. 7	·01473
13. 0	·01440
13. 25	·01380
15. 31	·01400
17. 16	·01380
18. 39	·01340
	·01305
19. 29	·01360
22. 5	·01370
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Off V. F. Magnet.
h m	°	°
June 4		
0. 0	70 ·1	68 ·8
1. 0	70 ·7	69 ·5
3. 0	70 ·5	70 ·0
9. 0	67 ·8	68 ·5
21. 0	60 ·2	60 ·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 3. HORIZONTAL FORCE. A sudden and large change took place in the position of this Magnet from some unknown cause. The box containing it was opened, and left open during the day; on the next day it was found necessary to adjust the mirror in order to bring the spot of light nearly central on the paper. Some workmen had been present in the room.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 4		June 4						
h m	° ′ ″	h m		h m		h m	°	°
14. 13	20. 42. 35	6. 46	·1087					
14. 22	44. 0	7. 9	·1069					
15. 16	45. 0	7. 16	·1080					
15. 28	43. 55	7. 20	·1078					
	***	7. 27	·1085					
16. 31	44. 50	7. 31	·1083					
16. 44	47. 10	7. 37	·1092					
16. 51	45. 55	7. 50	·1093					
17. 12	52. 25	8. 6	·1084					
18. 0	45. 35	8. 43	·1080					
18. 29	44. 0	9. 5	·1083					
18. 34	42. 25	9. 12	·1089					
18. 57	40. 0	9. 23	·1089					
19. 8	41. 45	9. 32	·1084					
19. 15	39. 55	9. 56	·1088					
19. 18	40. 35	10. 13	·1085					
19. 30	39. 40	10. 30	·1090					
20. 53	41. 5	10. 43	·1088					
21. 12	42. 55	10. 53	·1093					
22. 15	46. 20	11. 5	·1089					
22. 22	47. 55	11. 35	·1089					
22. 31	47. 50	11. 42	·1093					
22. 52	47. 55	11. 49	·1092					
22. 58	47. 25	12. 7	·1095					
23. 59	50. 0	12. 35	·1092					
		12. 53	·1107					
		13. 11	·1083					
		13. 30	·1088					
		14. 4	·1082					
		14. 16	·1085					
		14. 28	·1083					
		15. 1	·1082					
		15. 13	·1085					
		15. 24	·1082					
		16. 16	·1084					
		16. 25	·1079					
		16. 31	·1081					
		16. 42	·1074					
		16. 57	·1071					
		17. 12	·1079					
		17. 45	·1084					
		18. 14	·1082					
		18. 23	·1077					
		18. 43	·1076					
		18. 53	·1072					
		19. 37	·1065					
		20. 23	·1059					
		20. 52	·1060					
		21. 2	·1056					
		22. 22	·1056					
			(†)					
June 5		June 5		June 5		June 5		
0. 0	20. 50. 0	0. 0	·1058		(†)	1. 0	64 ·0	63 ·3
1. 25	51. 40	0. 23	·1059	1. 0	·01334	3. 0	64 ·4	63 ·6
2. 53	50. 50	1. 23	·1064	2. 0	·01330	9. 0	62 ·0	61 ·8
	***	1. 32	·1064	5. 57	·01333	21. 0	59 ·0	59 ·0
4. 40	47. 35	2. 0	·1069		·01200			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 5		June 5		June 5				
h m	° ′ ″	h m		h m		h m	°	°
5. 0	20. 48. 20	2. 15	·1064	7. 43	·01225			
5. 16	47. 35	2. 25	·1067	9. 42	·01227			
6. 19	47. 55	3. 0	·1065		·01150			
7. 17	45. 30	3. 58	·1070	12. 8	·01174			
7. 53	47. 0	4. 38	·1070	14. 45	·01190			
8. 22	46. 0	5. 5	·1075		·01060			
8. 32	46. 55	5. 10	·1074	18. 10	·01105			
8. 45	46. 5	5. 12	·1074		·01028			
9. 8	47. 10	5. 53	·1076	22. 35	·01020			
10. 31	46. 30	6. 2	·1080		(†)			
11. 15	47. 10	6. 8	·1078					
13. 16	44. 35	6. 16	·1081					
13. 20	46. 5	7. 8	·1073					
14. 29	45. 40	7. 38	·1077					
14. 34	46. 45	8. 24	·1074					
16. 52	43. 0	8. 35	·1071					
17. 18	41. 25	9. 15	·1074					
18. 38	41. 10	9. 22	·1072					
19. 29	39. 55	10. 37	·1072					
19. 35	41. 0	10. 46	·1074					
20. 15	39. 50	11. 6	·1073					
20. 23	41. 5	11. 11	·1077					
20. 49	40. 25	11. 17	·1075					
21. 2	43. 35	11. 22	·1077					
21. 58	41. 40	11. 45	·1074					
22. 41	44. 30	12. 0	·1075					
22. 52	44. 30	12. 24	·1072					
	(†)	12. 34	·1075					
			***					
		13. 22	·1074					
		14. 15	·1076					
		14. 27	·1074					
		14. 35	·1079					
		15. 0	·1076					
		15. 8	·1079					
		15. 21	·1076					
		15. 34	·1078					
			***					
		16. 21	·1078					
		17. 4	·1079					
		17. 9	·1082					
		17. 17	·1080					
		18. 8	·1079					
		19. 27	·1071					
		19. 45	·1066					
		19. 58	·1067					
		20. 35	·1061					
		20. 54	·1062					
		21. 25	·1057					
		21. 41	·1059					
		22. 9	·1056					
		22. 41	·1054					
			(†)					
June 6		June 6		June 6		June 6		
	(†)		(†)		(†)	1. 0	61 ·4	61 ·1
1. 0	20. 52. 36*	1. 0	·1069*	1. 0	·01009*	3. 0	63 ·0	62 ·2
3. 0	54. 51*	3. 0	·1087*	3. 0	·00995*	Max.	64 ·2	64 ·9

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 6. Visitation Day. The photographic traces were started at 6h. 30m.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 6		June 6		June 6		June 6		
h m	° ′ ″	h m		h m		h m	°	°
6. 33	20. 46. 55	6. 30	·1093	6. 13	·00990	9. 0	62 ·4	61 ·4
7. 22	48. 0	6. 45	·1082	9. 31	·00982	Min.	56 ·0	55 ·7
8. 2	47. 0	7. 3	·1091	12. 10	·01080	22. 45	58 ·2	57 ·7
8. 9	46. 5	7. 16	·1086	14. 56	·01120			
8. 50	45. 45	7. 48	·1091		(†)			
9. 7	47. 0	7. 59	·1088	15. 38	·01010			
9. 39	46. 0	8. 20	·1087	17. 44	·01065			
10. 6	46. 10	8. 40	·1090	20. 8	{·01010			
10. 49	44. 40	8. 52	·1089		{·00960			
11. 1	45. 0	9. 5	·1093	22. 29	·00943			
	(†)	9. 26	·1089	23. 59	·00910			
12. 17	46. 10	10. 55	·1090					
12. 42	44. 30	12. 19	·1093					
13. 0	44. 40	12. 37	·1087					
13. 16	44. 0	13. 2	·1088					
13. 53	45. 55	13. 15	·1086					
14. 22	44. 35	13. 41	·1088					
14. 27	46. 10	13. 54	·1091					
14. 56	45. 10	14. 22	·1088					
15. 14	48. 0	15. 40	·1088					
16. 28	45. 0	15. 51	·1093					
16. 36	50. 35	16. 37	·1092					
16. 51	45. 50	16. 58	·1095					
17. 15	44. 35	17. 16	·1090					
17. 47	45. 10	17. 30	·1094					
18. 8	47. 5	18. 17	·1086					
18. 30	47. 30	19. 24	·1096					
18. 35	49. 20	19. 40	·1083					
19. 0	48. 20	19. 52	·1085					
19. 7	43. 30	20. 10	·1082					
19. 10	46. 55	20. 38	·1077					
19. 15	44. 30	20. 53	·1077					
19. 23	46. 0	21. 20	·1070					
19. 33	42. 25	22. 37	·1059					
19. 45	44. 0	22. 52	·1052					
19. 51	41. 35	23. 10	·1054					
19. 59	45. 15	23. 23	·1059					
20. 28	41. 50	23. 33	·1058					
20. 46	41. 35	23. 45	·1061					
21. 5	40. 20	23. 52	·1057					
21. 13	41. 40	23. 59	·1060					
21. 53	41. 35							
22. 10	45. 0							
22. 23	44. 55							
22. 33	46. 40							
22. 43	46. 5							
22. 47	48. 25							
23. 6	48. 10							
23. 59	50. 10							
June 7		June 7		June 7		June 7		
0. 0	20. 50. 10	0. 0	·1060	0. 0	·00910	1. 0	61 ·0	59 ·8
0. 58	52. 35	0. 8	·1066	0. 40	·00920	Max.	64 ·0	64 ·8
1. 4	52. 0	0. 23	·1056	4. 10	·01055	9. 5	64 ·0	61 ·5
1. 37	53. 10	0. 37	·1061	6. 23	·01100	Min.	57 ·1	56 ·8
2. 2	51. 55	0. 53	·1053	11. 18	·01060	21. 0	59 ·0	57 ·6
2. 38	51. 40	1. 24	·1064	13. 31	·01108			
2. 57	49. 55	1. 33	·1059 ***	19. 8	·01308			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 7		June 7		June 7				
h m	° ′ ″	h m		h m		h m	°	°
3. 39	20. 49. 35	1. 57	·1056	21. 8	·01343			
3. 46	48. 45	2. 21	·1067	23. 59	·01270			
4. 12	49. 30	3. 3	·1072					
4. 20	48. 55	3. 32	·1080					
4. 52	50. 10	4. 4	·1081					
5. 0	49. 0	4. 28	·1086					
5. 56	47. 35	4. 48	·1085					
6. 12	46. 10	5. 6	·1088					
	(†)	5. 20	·1084					
9. 5	46. 43*		***					
9. 32	46. 10	5. 39	·1086					
10. 25	47. 20	5. 50	·1085					
10. 39	46. 30	6. 0	·1091					
11. 5	48. 50	6. 10	·1091					
11. 22	48. 0	6. 12	·1086					
11. 28	46. 55		(†)					
11. 53	46. 20	9. 5	·1078*					
12. 30	44. 40	9. 32	·1082					
12. 41	45. 5	9. 50	·1081					
13. 25	44. 30	10. 3	·1088					
13. 43	45. 25	10. 17	·1083					
13. 59	44. 35	10. 44	·1084					
14. 27	46. 15	11. 3	·1088					
16. 30	43. 50	11. 46	·1086					
17. 8	45. 25	12. 2	·1089					
17. 46	43. 35	12. 37	·1084					
17. 56	42. 0	13. 24	·1084					
18. 1	43. 15	14. 7	·1076					
18. 34	42. 35	14. 46	·1080					
19. 22	44. 0	16. 14	·1081					
20. 6	43. 0	16. 45	·1079					
21. 13	43. 30	17. 13	·1082					
22. 56	47. 20	17. 58	·1078					
23. 11	49. 5	18. 4	·1080					
23. 24	48. 35	18. 48	·1081					
23. 59	50. 35	19. 59	·1074					
		20. 30	·1072					
		20. 47	·1068					
		21. 8	·1066					
		22. 31	·1060					
		22. 47	·1062					
		23. 26	·1062					
		23. 39	·1063					
		23. 59	·1062					
June 8		June 8		June 8		June 8		
0. 0	20. 50. 35	0. 0	·1062	0. 0	·01270	1. 0	61 ·8	60 ·0
0. 18	51. 5	0. 14	·1061	2. 44	·01220	3. 0	63 ·0	61 ·5
0. 32	52. 0	0. 35	·1063	5. 11	·01093	Max.	63 ·8	64 ·7
0. 38	51. 0	0. 50	·1066	7. 10	·01113	9. 0	63 ·2	61 ·2
1. 19	51. 10	1. 13	·1064	8. 38	·01100	18. 0	58 ·6	57 ·2
1. 28	50. 40	1. 38	·1069	10. 18	·01110	Min.	56 ·0	55 ·6
2. 1	52. 0	2. 0	·1070	14. 0	·01240	21. 0	57 ·9	56 ·9
2. 23	50. 55	2. 9	·1074	14. 52	·01250			
3. 7	51. 45	2. 32	·1078	19. 19	·01430			
	***	2. 42	·1081	21. 4	·01465			
4. 2	49. 30	3. 2	·1082	21. 23	·01420			
5. 23	49. 0 ***	3. 14	·1081	23. 59	·01400			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the readings will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 7. The Declination and Horizontal Force cylinder was stopped from $6^h.\ 12^m.$ to $9^h.\ 32^m.$

Greenwich Mean Solar Time.	Western Declination.
June 8	
h m	° ′ ″
7. 41	20. 48. 5
8. 11	48. 35
8. 35	45. 25
9. 1	44. 0
9. 41	46. 40
10. 52	46. 0
11. 16	46. 40
11. 57	45. 25
12. 13	46. 35
12. 37	45. 10
12. 53	45. 0
13. 0	46. 25
13. 28	45. 0
13. 59	48. 55
15. 8	44. 25
15. 41	43. 30
16. 50	39. 55
17. 34	38. 20
18. 20	39. 15
	***
20. 17	44. 30
20. 51	44. 5
22. 1	49. 10
22. 16	48. 25
22. 23	51. 5
23. 7	47. 55
23. 11	49. 25
23. 42	48. 20
23. 59	48. 35
June 9	
0. 0	20. 48. 35
0. 7	50. 35
0. 48	50. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 8	
h m	
4. 12	·1083
5. 8	·1087
5. 22	·1090
5. 38	·1087
5. 56	·1091
6. 10	·1092
6. 31	·1097
6. 43	·1095
7. 24	·1093
7. 35	·1094
8. 6	·1093
8. 18	·1088
8. 38	·1095
9. 10	·1092
9. 25	·1093
9. 45	·1091
10. 22	·1094
10. 28	·1092
10. 38	·1094
11. 4	·1095
11. 23	·1093
11. 38	·1094
11. 54	·1091
12. 0	·1094
12. 7	·1090
12. 23	·1089
12. 40	·1096
12. 52	·1095
13. 21	·1086
13. 36	·1089
14. 10	·1091
14. 17	·1090
14. 30	·1091
14. 48	·1086
15. 12	·1087
15. 31	·1093
15. 49	·1091
16. 13	·1094
16. 39	·1092
18. 0	·1089
18. 36	·1084
19. 6	·1077
20. 5	·1080
20. 32	·1074
20. 43	·1074
21. 26	·1069
21. 49	·1070
22. 6	·1066
22. 24	·1068
22. 38	·1066
23. 28	·1068
23. 50	·1066
23. 59	·1067
June 9	
0. 0	·1067
0. 11	·1070
0. 40	·1067

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
0. 0	·01400
0. 40	·01367
1. 20	·01365

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
1. 0	61 ·1	59 ·8
3. 0	62 ·5	60 ·8
Max.	64 ·0	65 ·0

Greenwich Mean Solar Time.	Western Declination.
June 9	
h m	° ′ ″
1. 36	20. 53. 0
1. 47	51. 0
2. 5	51. 50
2. 23	49. 55
2. 54	50. 5
	***
4. 18	46. 30
4. 38	46. 55
4. 47	44. 35
5. 22	45. 0
5. 46	44. 10
7. 40	46. 10
	(†)
9. 0	44. 1*
9. 20	40. 55
9. 48	42. 20
10. 40	43. 0
11. 9	41. 25
12. 0	41. 40
13. 13	39. 25
	(†)
13. 48	46. 25
14. 19	42. 35
14. 43	42. 50
14. 54	39. 35
15. 7	35. 40
15. 16	36. 10
15. 39	34. 45
15. 53	32. 35
16. 6	32. 45
16. 22	34. 30
16. 31	34. 10
16. 58	41. 25
17. 15	39. 50
17. 31	41. 40
17. 44	39. 40
17. 52	40. 0
18. 26	41. 0
18. 29	40. 35
18. 49	46. 25
19. 9	45. 30
19. 31	45. 10
19. 46	43. 25
19. 56	44. 30
20. 46	42. 15
20. 55	45. 30
21. 17	43. 25
21. 25	47. 5
21. 30	46. 15
21. 33	47. 55
21. 52	46. 50
21. 59	48. 30
22. 17	48. 0
22. 27	49. 0
22. 55	47. 50
23. 8	49. 25
23. 27	49. 10
23. 38	50. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 9	
h m	
1. 0	·1073
1. 39	·1071
	***
3. 12	·1091
3. 47	·1094
4. 10	·1100
4. 22	·1100
4. 33	·1104
4. 46	·1100
	***
5. 30	·1097
6. 39	·1102
6. 55	·1099
7. 15	·1103
7. 40	·1098
	(†)
9. 0	·1093
9. 20	·1097
9. 22	·1098
9. 30	·1104
9. 58	·1092
10. 18	·1092
10. 30	·1090
11. 0	·1093
11. 14	·1085
11. 23	·1090
11. 33	·1087
11. 41	·1090
11. 50	·1089
12. 0	·1093
12. 9	·1088
12. 35	·1095
12. 47	·1089
13. 0	·1095
13. 11	·1094
13. 17	·1098
13. 25	·1098
13. 44	·1113
14. 23	·1099
14. 38	·1102
15. 10	·1083
15. 37	·1100
15. 43	·1097
16. 0	·1094
16. 30	·1106
17. 21	·1075
17. 45	·1043
17. 52	·1044
18. 6	·1032
18. 22	·1052
18. 31	·1053
18. 50	·1065
18. 58	·1065
19. 16	·1060
19. 50	·1057
20. 8	·1066
20. 52	·1045
21. 4	·1042

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
June 9	
h m	
5. 10	·01208
	·01180
6. 25	·01120
9. 17	·01120
10. 30	·01080
13. 12	·01110
13. 38	·01080
14. 49	·01060
15. 7	·01095
15. 45	·01090
16. 11	·01120
17. 13	·01125
18. 15	·01200
19. 47	·01227
20. 11	·01270
20. 45	·01280
21. 34	·01355
23. 59	·01380

Greenwich Mean Solar Time.	Readings of Thermometers.	
	Of H. F. Magnet.	Of V. F. Magnet.
June 9		
h m	°	°
9. 0	64 ·0	62 ·0
18. 0	59 ·3	57 ·8
Min.	57 ·1	56 ·9
21. 0	58 ·9	58 ·2
22. 0	59 ·1	58 ·3
23. 0	59 ·8	59 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 9. The Declination and Horizontal Force cylinder was stopped between $7^h.\ 40^m.$ and $9^h.\ 20^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 9		June 9						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 50. 15	21. 23	·1046					
		21. 39	·1052					
		21. 45	·1049					
		21. 53	·1050					
		22. 0	·1047					
		22. 5	·1051					
		22. 17	·1048					
		22. 44	·1055					
		22. 54	·1050					
		23. 8	·1053					
		23. 23	·1045					
		23. 37	·1042					
		23. 54	·1044					
		23. 59	·1041					
June 10		June 10		June 10		June 10		
0. 0	20. 50. 15	0. 0	·1041	0. 0	·01380	0. 0	60 ·3	59 ·0
0. 14	50. 25	0. 14	·1032	1. 18	·01420	1. 0	61 ·0	60 ·0
0. 23	54. 10	0. 29	·1051	2. 41	·01370	2. 0	61 ·7	60 ·9
0. 59	52. 50	0. 42	·1053	3. 25	·01375	3. 0	62 ·7	61 ·5
1. 53	53. 50	1. 19	·1066	7. 12	·01217	6. 0	64 ·9	63 ·0
2. 0	55. 0	1. 38	·1050	10. 48	·01140	Max.	65 ·5	65 ·8
2. 37	54. 25	1. 53	·1056	11. 18	·01110	9. 0	65 ·5	63 ·3
2. 50	55. 35	2. 13	·1056	13. 2	·01174	12. 0	64 ·0	61 ·7
3. 21	55. 30	2. 16	·1059	13. 50	·01160	18. 0	61 ·0	58 ·8
	***	2. 37	·1055	14. 14	·01190	Min.	57 ·6	58 ·3
4. 13	49. 50	3. 2	·1078	19. 45	·01410	21. 0	59 ·0	58 ·9
4. 25	50. 0	3. 11	·1073	22. 3	·01424	22. 0	60 ·0	58 ·8
4. 33	49. 10	3. 23	·1069	22. 42	·01280	23. 0	60 ·3	59 ·0
5. 23	51. 5	3. 36	·1056	23. 59	·01310			
5. 42	47. 45	4. 8	·1074					
6. 0	48. 50	4. 25	·1071					
6. 19	42. 35	4. 55	·1088					
6. 37	41. 30	5. 8	·1087					
8. 7	46. 30	5. 17	·1098					
8. 25	48. 40	5. 25	·1096					
8. 40	46. 55	5. 33	·1099					
9. 53	48. 0	5. 54	·1068					
10. 25	44. 25	6. 31	·1096					
10. 44	44. 30	6. 55	·1085					
11. 33	41. 30	7. 8	·1092					
12. 23	39. 45	7. 23	·1084					
12. 53	41. 25	7. 42	·1083					
13. 20	40. 35	8. 6	·1074					
13. 38	38. 10	8. 15	·1082					
14. 5	40. 30	8. 22	·1078					
14. 26	39. 30	8. 31	·1079					
15. 1	39. 45	8. 39	·1074					
15. 30	41. 20	9. 14	·1074					
15. 45	44. 0	9. 23	·1070					
16. 25	42. 50	9. 37	·1073					
17. 2	42. 35	10. 0	·1068					
17. 17	41. 30	10. 20	·1074					
17. 45	42. 0	10. 29	·1072					
18. 16	41. 40	10. 49	·1101					
18. 28	43. 0	11. 44	·1068					
18. 47	41. 40	12. 30	·1058					
19. 31	40. 25	13. 4	·1062					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 10		June 10						
h m	° ′ ″	h m		h m		h m	°	°
19. 45	20. 41. 5	13. 16	·1060					
19. 58	40. 30	13. 36	·1068					
	***	13. 48	·1065					
20. 37	44. 40	14. 6	·1075					
21. 3	45. 25	14. 58	·1065					
21. 38	44. 35	15. 7	·1069					
23. 38	51. 20	15. 45	·1054					
23. 45	49. 40	16. 16	·1065					
23. 59	50. 30	16. 31	·1063					
		17. 39	·1071					
		18. 3	·1067					
		18. 21	·1066					
		18. 52	·1055					
			(†)					
		21. 0	·1050*					
		21. 17	·1054					
		21. 36	·1054					
		21. 54	·1057					
		22. 34	·1056					
			(†)					
		23. 54	·1069					
		23. 59	·1068					
June 11		June 11		June 11		June 11		
0. 0	20. 50. 30	0. 0	·1068	0. 0	·01310	0. 0	61 ·3	59 ·0
0. 16	52. 0	0. 36	·1063	4. 53	·01180	1. 0	62 ·0	59 ·9
0. 22	51. 25	0. 53	·1064	5. 34	·01190	2. 0	62 ·6	60 ·5
0. 53	54. 0	1. 4	·1063	10. 14	·01120	3. 0	63 ·2	61 ·0
1. 18	54. 20	1. 16	·1066	14. 48	·01200	Max.	63 ·9	64 ·6
1. 36	52. 35	1. 22	·1063	19. 15	·01437	9. 0	63 ·9	62 ·0
2. 8	53. 25	1. 32	·1066	21. 58	·01505	18. 0	59 ·4	58 ·0
2. 30	51. 45	1. 45	·1063	23. 59	·01520	Min.	57 ·6	56 ·9
2. 53	52. 45	2. 16	·1063			21. 0	59 ·0	57 ·5
3. 15	49. 40	2. 23	·1065					
3. 36	49. 5	2. 37	·1064					
3. 45	49. 45	3. 1	·1080					
	***	3. 8	·1079					
4. 26	47. 10	3. 25	·1094					
4. 47	44. 30	3. 32	·1090					
5. 4	46. 30	3. 45	·1098					
5. 30	46. 40	3. 53	·1096					
5. 51	45. 25	4. 7	·1100					
6. 37	46. 40	4. 22	·1087					
	(†)	4. 48	·1097					
7. 44	45. 55	4. 53	·1096					
8. 39	46. 55	5. 9	·1106					
10. 0	46. 0	5. 16	·1100					
10. 9	45. 0	5. 37	·1103					
10. 42	44. 30	6. 2	·1093					
10. 53	45. 30	6. 18	·1095					
11. 5	44. 0	6. 29	·1099					
11. 37	43. 55	6. 37	·1095					
13. 18	43. 50		(†)					
13. 30	43. 0	7. 37	·1089					
13. 46	43. 30	7. 46	·1091					
13. 52	44. 55	8. 36	·1085					
14. 2	44. 30	8. 59	·1086					
14. 37	48. 35	9. 11	·1087					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the readings will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 11. The Declination and Horizontal Force cylinder was stopped from $6^{h}.\ 37^{m}.$ to $7^{h}.\ 37^{m}.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 11		June 11						
h m	° ′ ″	h m		h m		h m	°	°
15. 20	20. 46. 20	9. 37	·1087					
15. 41	43. 50	9. 45	·1090					
15. 59	44. 0	9. 58	·1090					
16. 20	43. 5	10. 12	·1095					
16. 39	43. 30	10. 34	·1089					
17. 12	42. 35	10. 47	·1088					
17. 23	43. 45	11. 4	·1098					
19. 8	40. 25	11. 31	·1092					
19. 23	41. 0	12. 6	·1097					
19. 38	40. 10	12. 15	·1094					
19. 45	40. 30	12. 23	·1095					
19. 59	40. 15	12. 50	·1093					
20. 33	42. 10	13. 8	·1084					
20. 52	41. 40	13. 17	·1085					
21. 40	43. 0	13. 44	·1080					
21. 49	44. 5	14. 13	·1089					
23. 38	46. 30	14. 27	·1086					
23. 59	47. 0	14. 41	·1089					
		14. 46	·1087					
		15. 10	·1087					
		15. 42	·1081					
		15. 59	·1082					
		16. 45	·1078					
		17. 11	·1083					
		17. 44	·1082					
		18. 8	·1075					
		19. 15	·1070					
		19. 28	·1071					
		20. 49	·1066					
		21. 10	·1069					
		21. 39	·1062					
		21. 55	·1063					
			(†)					
		23. 6	·1059					
		23. 16	·1065					
		23. 28	·1063					
		23. 40	·1064					
		23. 54	·1074					
		23. 59	·1073					
June 12		June 12		June 12		June 12		
0. 0	20. 47. 0	0. 0	·1073	0. 0	·01520	1. 0	61 ·0	60 ·0
1. 38	53. 0	0. 10	·1074	1. 22	·01520	3. 0	62 ·0	60 ·2
1. 47	51. 55	0. 25	·1078	2. 15:	·01450	Max.	62 ·8	62 ·7
2. 16	53. 0	0. 40	·1077	3. 45	·01433	9. 0	60 ·0	58 ·3
2. 24	51. 30	0. 52	·1079	6. 19:	·01380	18. 0	57 ·0	55 ·9
3. 22	51. 25	1. 12	·1086	9. 28	·01440	Min.	54 ·6	54 ·6
3. 28	53. 5	1. 55	·1084	12. 4	·01475	21. 0	56 ·2	56 ·1
4. 7	53. 50	2. 6	·1089	12. 41	·01460			
4. 12	52. 20	2. 17	·1091	15. 11	·01535			
4. 25	52. 25	2. 24	·1089	16. 11	·01555			
4. 39	49. 15	2. 38	·1091	16. 39	·01532			
5. 2	48. 40	3. 4	·1085	21. 21	·01530			
5. 8	46. 25	3. 21	·1091	22. 26	·01505			
5. 16	47. 0	3. 35	·1088		(†)			
5. 22	45. 45	4. 8	·1084					
	(†)	4. 15	·1086					
9. 0	45. 12*	4. 29	·1083					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 12		June 12						
h m	° ′ ″	h m		h m		h m	°	°
21. 0	20. 39. 6*	5. 13	·1088					
		5. 22	·1087					
		5. 37	·1091					
		6. 26	·1094					
		6. 38	·1090					
		6. 46	·1096					
		7. 7	·1093					
		7. 30	·1100					
		7. 53	·1099					
		8. 0	·1097					
		8. 7	·1099					
		8. 28	·1095					
		8. 43	·1096					
		8. 56	·1089					
		9. 10	·1092					
		9. 32	·1088					
		9. 47	·1088					
		9. 59	·1094					
		10. 9	·1090					
		10. 14	·1094					
		11. 14	·1099					
		11. 25	·1094					
		11. 33	·1097					
		11. 58	·1100					
		12. 8	·1096					
		12. 25	·1092					
		13. 7	·1087					
			(†)					
		13. 57	·1089					
		14. 4	·1086					
		14. 15	·1089					
		14. 48	·1088					
		15. 3	·1090					
		15. 40	·1082					
		16. 22	·1083					
		16. 52	·1093					
		17. 30	·1093					
		17. 49	·1086					
		18. 33	·1083					
		18. 49	·1077					
		19. 9	·1075					
		19. 23	·1079					
		19. 34	·1076					
		19. 44	·1080					
		19. 53	·1078					
		20. 23	·1073					
		20. 32	·1079					
		20. 56	·1077					
		21. 1	·1080					
		21. 6	·1076					
		21. 22	·1083					
		21. 26	·1081					
		21. 52	·1081					
		22. 0	·1083					
		22. 17	·1079					
		22. 23	·1082					
		22. 38	·1069					
		22. 51	·1077					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 12. The Declination register was lost after 5^{h}. 22^{m}.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	June 12 h m		h m		h m	°	°
		23. 15	·1073 (†)					
June 13		June 13				June 13		
	(†)		(†)			1. 0	58·0	58·6
1. 0	20. 51. 32*	0. 12	·1066			3. 0	61·8	63·0
1. 40	50. 45	0. 34	·1068			Max.	64·8	..
2. 0	50. 0	1. 0	·1065			9. 0	64·0	..
2. 22	50. 30	1. 49	·1078			Min.	56·5	..
2. 49	49. 5	2. 6	·1073			22. 30	59·0	..
3. 7	50. 10	2. 25	·1075					
3. 42	48. 25	2. 47	·1082					
4. 10	49. 20	3. 7	·1080					
4. 46	43. 20	3. 30	·1066					
5. 7	44. 10	4. 5	·1080					
5. 22	45. 50	4. 18	·1077					
6. 25	46. 20	4. 27	·1082					
7. 34	43. 25	4. 38	·1080					
7. 56	45. 35	4. 48	·1084					
8. 25	42. 40	5. 7	·1076					
8. 51	44. 45	5. 28	·1094					
9. 6	43. 25	5. 47	·1093					
9. 18	45. 5	6. 0	·1104					
9. 43	43. 20	6. 22	·1088					
10. 15	46. 15	6. 58	·1084					
10. 50	42. 45	7. 15	·1096					
11. 15	44. 40	7. 23	·1095					
11. 33	43. 5	7. 38	·1097					
11. 45	45. 5	7. 45	·1093					
12. 13	44. 25	7. 54	·1095					
12. 42	39. 55	8. 17	·1086					
	(†)	8. 33	·1086					
14. 37	47. 5	8. 51	·1092					
14. 52	47. 50	9. 8	·1082					
15. 18	41. 30	9. 23	·1088					
15. 37	45. 5	9. 43	·1081					
15. 58	42. 30	9. 55	·1085					
16. 23	46. 30	10. 9	·1082					
17. 0	42. 0	10. 47	·1090					
17. 10	43. 5	11. 3	·1088					
17. 21	41. 0	11. 49	·1094					
17. 45	46. 55	12. 7	·1089					
18. 18	48. 15	12. 17	·1092					
19. 24	45. 20	12. 36	·1086					
20. 0	45. 30		(†)					
20. 14	44. 0 ***	13. 44	·1086					
		14. 16	·1087					
21. 2	43. 25	14. 45	·1085					
21. 35	46. 0	14. 53	·1089					
22. 31	46. 45	15. 0	·1086					
23. 1	48. 30	15. 17	·1086					
	(†)	15. 49	·1070					
		15. 58	·1072					
		16. 17	·1066					
		16. 58	·1080					
		17. 13	·1076					
		18. 0:	·1058					
		18. 52	·1076					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	June 13 h m		h m		h m	°	°
		19. 17	·1076					
		20. 14	·1062					
		20. 27	·1066					
		21. 1	·1061					
		21. 13	·1064					
		21. 38	·1057					
		21. 46	·1057					
		22. 28	·1060					
		23. 0	·1071					
			(†)					
June 14		June 14				June 14		
	(†)		(†)			8. 0	66·9	..
8. 0	20. 46. 58*	8. 0	·1092*			Max.	66·9	..
10. 22	41. 45	10. 13	·1070			18. 0	63·9	..
10. 59	43. 35	10. 35	·1071			Min.	62·0	..
12. 14	39. 40	11. 26	·1069			21. 0	63·2	..
12. 47	36. 5	12. 43	·1075					
13. 56	36. 15	13. 18	·1069					
14. 18	38. 50	14. 2	·1064					
14. 29	38. 55	14. 43	·1062					
14. 57	43. 40	15. 0	·1068					
15. 7	42. 55	15. 36	·1071					
15. 29	44. 20	17. 21	·1064					
17. 18	42. 10	17. 30	·1061					
17. 39	42. 40	17. 54	·1063					
17. 56	40. 45	18. 13	·1059					
18. 22	42. 55	18. 47	·1058					
18. 45	39. 35	19. 25	·1054					
20. 9	39. 0	20. 16	·1052					
20. 38	40. 50	20. 29	·1054					
21. 0	41. 0	20. 49	·1051					
22. 6	47. 35	22. 15	·1055					
22. 32	48. 0	22. 23	·1058					
23. 43	52. 5	22. 37	·1054					
23. 59	52. 25	22. 53	·1059					
		23. 48	·1059					
		23. 59	·1057					
June 15		June 15		June 15		June 15		
0. 0	20. 52. 25	0. 0	·1057		(†)	1. 0	66·0	67·6
0. 28	52. 45	0. 30	·1054	1. 0	·01665	3. 0	68·0	67·5
0. 44	54. 10	0. 37	·1061	3. 0	{·01630	Max.	69·0	69·0
0. 57	54. 5	0. 55	·1063		{·01780	9. 0	69·0	68·0
	(†)	1. 28	·1074	9. 52	·01540	18. 45	62·2	63·6
1. 46	54. 5	1. 46	·1065	11. 50	·01540	Min.	60·2	60·4
2. 7	53. 55	2. 7	·1075	13. 41	·01600	21. 0	61·8	63·0
3. 1	51. 20	3. 2	·1078	14. 10	·01587			
3. 13	52. 5	3. 16	·1085	16. 15	·01788			
3. 38	50. 55	3. 38	·1083	19. 12	·01940			
3. 52	50. 50	4. 0	·1084	21. 19	{·02000			
4. 37	48. 10	4. 23	·1073		{·02060			
4. 56	49. 5	4. 40	·1071	23. 27	·02117			
5. 14	48. 0	5. 3	·1086		(†)			
5. 44	49. 0	5. 18	·1081	23. 59	·02380			
7. 23	37. 25	5. 28	·1088					
8. 6	42. 55	6. 4	·1094					
8. 33	43. 30	6. 37	·1087					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 13. Workmen were engaged near the Vertical Force Magnet, and its adjustments were disturbed.

June 14. The cylinder of the Declination and Horizontal Force moved irregularly till $10^h.\ 13^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
June 15		June 15						
h m	° ′ ″	h m		h m		h m	°	°
9. 2	20. 45. 15	6. 51	·1089					
	***	7. 12	·1072					
10. 9	44. 0	7. 29	·1090					
10. 30	45. 35	7. 36	·1085					
10. 57	42. 40	7. 45	·1084					
11. 30	41. 45	8. 15	·1069					
11. 52	42. 35	9. 28	·1073					
	***	9. 45	·1072					
13. 6	41. 5	10. 31	·1076					
13. 30	46. 0	10. 53	·1070					
	***	11. 15	·1072					
13. 53	41. 55	11. 38	·1069					
14. 21	40. 5	13. 9	·1072					
15. 55	43. 10	13. 42	·1097					
16. 31	39. 45	13. 53	·1090					
17. 17	38. 45	14. 42	·1077					
17. 46	40. 5	15. 16	·1079					
18. 15	37. 20	15. 23	·1077					
18. 26	38. 55	15. 51	·1082					
	***	17. 4	·1074					
19. 0	39. 5	17. 30	·1074					
19. 28	43. 0	17. 38	·1077					
19. 56	44. 35	19. 15	·1056					
20. 18	41. 0	19. 31	·1060					
20. 34	43. 0	20. 8	·1053					
21. 20	41. 35	20. 28	·1062					
22. 14	44. 30	20. 52	·1062					
22. 26	47. 0	21. 18	·1067					
	***	21. 30	·1066					
23. 59	52. 5		(†)					
June 16		June 16		June 16		June 16		
0. 0	20. 52. 5		(†)	0. 0	·02380	1. 0	65 ·9	66 ·7
0. 7	53. 40	1. 0	·1066*	1. 0	·02430	3. 0	67 ·0	67 ·3
0. 18	52. 50	1. 32	·1128	1. 55	·02420	Max.	67 ·0	68 ·0
0. 55	52. 30	1. 53	·1137		·02400	9. 0	66 ·9	68 ·0
1. 18	54. 5	2. 8	·1130	3. 0	·02375	18. 0	63 ·0	64 ·0
1. 30	53. 25	2. 23	·1134	5. 55	·02240	Min.	60 ·8	60 ·8
1. 55	54. 30	2. 43	·1128	6. 10	·02240	21. 0	62 ·0	63 ·6
2. 33	51. 5	3. 0	·1138	9. 20	·02070	22. 0	62 ·1	63 ·7
	***	3. 37	·1131	12. 37	·02077	23. 0	62 ·8	64 ·4
3. 51	51. 5	3. 45	·1135	19. 0	·02356			
4. 8	52. 10	3. 54	·1133	23. 59	·02400			
	***	4. 22	·1142					
5. 54	47. 50	4. 46	·1140					
6. 15	43. 10	5. 1	·1142					
6. 33	45. 40	5. 15	·1141					
6. 48	44. 30	5. 30	·1147					
8. 16	47. 25	5. 38	·1145					
	***	5. 52	·1136					
11. 15	47. 15	6. 3	·1153					
11. 27	48. 50	6. 8	·1153					
11. 49	47. 10	6. 17	·1158					
12. 16	47. 25	6. 36	·1145					
12. 39	45. 10	6. 53	·1144					
13. 12	46. 0		***					
13. 22	47. 0	7. 23	·1134					
13. 47	47. 10	8. 13	·1137					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
June 16		June 16						
h m	° ′ ″	h m		h m		h m	°	°
14. 15	20. 45. 20	8. 45	·1134					
14. 53	48. 5	9. 7	·1134					
16. 5	44. 15	9. 18	·1136					
16. 33	46. 5	10. 1	·1134					
16. 39	48. 35	10. 38	·1135					
16. 51	48. 10	10. 45	·1138					
17. 8	49. 35	11. 13	·1137					
18. 10	44. 10	11. 22	·1144					
18. 16	44. 45	11. 37	·1141					
18. 35	45. 25	12. 10	·1144					
19. 2	42. 55	12. 53	·1132					
20. 28	42. 25	13. 40	·1135					
21. 22	44. 50	14. 19	·1133					
23. 44	54. 25	15. 23	·1138					
	(†)	15. 53	·1134					
		16. 31	·1123					
		17. 5	·1130					
		17. 32	·1127					
		17. 49	·1127					
		18. 9	·1130					
		18. 36	·1125					
			***					
		20. 37	·1117					
		21. 2	·1115					
		21. 30	·1115					
		21. 45	·1116					
		22. 24	·1114					
		23. 14	·1117					
		23. 28	·1116					
			(†)					
June 17		June 17		June 17		June 17		
	(†)		(†)	0. 0	·02400	0. 0	63 ·3	64 ·1
0. 19	20. 54. 30	0. 19	·1113	2. 0:	·02422	1. 0	64 ·0	65 ·2
0. 58	55. 30	0. 30	·1120	4. 13	·02305	2. 0	65 ·0	67 ·0
2. 31	53. 5	1. 7	·1124	5. 25	·02120	3. 0	66 ·0	67 ·5
3. 50	51. 45		(†)	9. 55:	·01740	6. 0	69 ·5	70 ·6
4. 23	49. 30	2. 47	·1134	13. 45	·01737	Max.	70 ·0	71 ·2
4. 52	49. 5	3. 1	·1137	19. 19	·02155	9. 0	70 ·0	71 ·1
5. 5	48. 0	3. 15	·1135	23. 38	·02280	12. 0	68 ·2	69 ·8
	***	3. 26	·1138	23. 59	·02276	18. 0	63 ·2	65 ·0
5. 47	46. 35		***			Min.	61 ·1	60 ·6
6. 37:	47. 10	4. 23	·1133			21. 0	65 ·3	64 ·0
7. 16	43. 40	4. 44	·1136			22. 0	65 ·9	64 ·9
7. 25	43. 45		***			23. 0	66 ·3	65 ·8
7. 49	46. 25	5. 20	·1128					
8. 6	47. 20	5. 38	·1131					
8. 18	46. 25	5. 46	·1129					
	***	6. 30	·1135					
9. 25	47. 5	6. 58	·1130					
9. 45	46. 30	7. 30	·1143					
9. 57	47. 5	8. 1	·1138					
10. 41	46. 30	8. 31	·1127					
11. 28	47. 15	8. 38	·1129					
12. 0	46. 45	9. 10	·1126					
	***	9. 52	·1128					
12. 23	49. 40	10. 37	·1127					
	***	11. 0	·1126					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

HORIZONTAL FORCE.—June 15^{d}. 21½^{h}. to 16^{d}. 1^{h}. The adjustments of this magnet were under examination, and at 1^{h}. 32^{m}. a series began giving indications about 0·006 parts of the whole Horizontal Force larger than the preceding series. Therefore, to reduce the series from January 3 to February 3^{d}. 0^{h}. 49^{m}. to that beginning this day, add 0·01 ; and to reduce that beginning February 3^{d}. 1^{h}. and ending June 15^{d}. 21^{h}. 30^{m}. add 0·006.

June 15^{d}. 23^{h}. 27^{m}. The reading for the Vertical Force Magnet was ·02117, the magnet was removed for examination of its knife-edges, and on replacing it, the reading for the Vertical Force was found to be ·02380.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 17		June 17						
h m	° ′ ″	h m		h m		h m	°	°
12. 44	20. 47. 15	11. 15	·1130					
13. 2	49. 10	11. 30	·1128					
14. 4	44. 0	11. 39	·1129					
14. 59	47. 10	12. 0	·1128					
	***	12. 21	·1135					
15. 40	44. 25	13. 30	·1135					
16. 26	43. 50	13. 45	·1133					
16. 35	45. 20	14. 25	·1130					
	***	14. 47	·1124					
17. 47	40. 25	15. 52	·1135					
18. 2	41. 45	16. 29	·1132					
18. 44	40. 40	16. 52	·1134					
19. 8	40. 55		***					
19. 23	39. 35	18. 7	·1134					
19. 45	40. 55	18. 37	·1127					
	***	18. 45	·1127					
20. 26	39. 55		***					
21. 31	43. 5	20. 8	·1107					
23. 41	51. 25		***					
23. 59	51. 45	21. 55	·1098					
		22. 22	·1099					
		22. 54	·1098					
		23. 10	·1089					
		23. 24	·1088					
		23. 59	·1107					
June 18		June 18		June 18		June 18		
0. 0	20. 51. 45	0. 0	·1107	0. 0	·02276	0. 0	66·9	66·8
0. 53	53. 35	0. 7	·1108	2. 0	·02120	1. 0	67·7	67·7
2. 53	53. 50	0. 21	·1114	3. 7	·01965	2. 0	68·6	68·7
3. 30	53. 0	0. 32	·1113		·01917	3. 0	69·5	69·8
3. 43	51. 25	1. 1	·1129	4. 8:	·01800	Max.	70·9	72·0
4. 37	49. 0	1. 28	·1134	5. 12	·01780	9. 0	69·7	70·5
5. 6	47. 50	1. 36	·1133		(†)	18. 0	64·8	66·0
5. 26	47. 55	1. 51	·1145	7. 11	·01950	Min.	62·0	62·0
5. 49	47. 0	2. 3	·1145	7. 52	·01895	21. 0	63·4	65·0
6. 28	47. 20	2. 22	·1152	9. 50	·01867			
	***	3. 0	·1151	11. 3	·01930			
8. 7	45. 15	3. 38	·1157	12. 5	·01920			
9. 27	46. 15	4. 18	·1151	17. 15	·02206			
10. 15	44. 20	4. 30	·1155	18. 18	·02220			
	(†)	4. 52	·1148		·02300			
11. 17	47. 0	5. 8	·1145	23. 30	·02360			
11. 31	41. 20	5. 23	·1147	23. 59	·02370			
11. 48	42. 35	5. 30	·1143					
12. 16	41. 30	6. 21	·1143					
12. 27	39. 45	6. 30	·1139					
12. 45	39. 35	6. 51	·1136					
14. 0	44. 30	7. 0	·1138					
15. 0	42. 50	7. 16	·1135					
15. 26	43. 25	7. 48	·1133					
15. 50	41. 30	8. 48	·1134					
16. 37	41. 10	9. 20	·1139					
16. 45	42. 40	10. 0	·1139					
16. 58	40. 55	10. 15	·1142					
17. 7	42. 5		(†)					
	***	11. 17	·1135					
17. 43	40. 25	11. 24	·1134					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 18		June 18						
h m	° ′ ″	h m		h m		h m	°	°
17. 47	20. 41. 35	11. 38	·1151					
18. 2	42. 5	11. 46	·1156					
18. 45	40. 10	12. 30	·1140					
19. 25	39. 30	13. 23	·1135					
19. 56	39. 55	13. 43	·1138					
20. 52	42. 20	14. 24	·1137					
	***	14. 52	·1142					
22. 36	47. 5	15. 29	·1140					
22. 46	48. 50	15. 50	·1143					
	(†)		***					
23. 38	48. 0	17. 6	·1139					
23. 59	49. 20	18. 0	·1143					
		18. 15	·1140					
		18. 46	·1144					
		20. 3	·1134					
		21. 0	·1131					
		21. 33	·1126					
		21. 44	·1121					
		22. 1	·1121					
		22. 8	·1118					
		22. 31	·1124					
			(†)					
June 19		June 19		June 19		June 19		
0. 0	20. 49. 20		(†)	0. 0	·02370	1. 0	64·0	65·2
0. 23	50. 45	3. 0	·1063*	2. 23	·02460	3. 0	65·2	66·0
	***	8. 24	·1073		·02390	Max.	67·8	68·9
1. 23	51. 45	8. 39	·1065	4. 18:	·02400	9. 0	67·8	68·9
1. 32	52. 45	8. 52	·1074	5. 53	·02273	Min.	62·1	62·4
1. 44	52. 0	9. 9	·1057	8. 55	·02130	21. 0	63·4	67·3
2. 23	52. 45	9. 22	·1061	9. 44	·02060			
	(†)	9. 52	·1059	12. 30	·02020			
3. 0	52. 6*	10. 5	·1060	14. 53	·02070			
9. 0	44. 35	10. 35	·1056	23. 59	·02450			
9. 20	40. 20	11. 12	·1064					
9. 37	42. 15	11. 42	·1058					
	***	11. 55	·1059					
10. 5	42. 30	12. 20	·1057					
10. 13	43. 20	12. 53	·1063					
10. 58	44. 5	13. 6	·1058					
11. 34	46. 0	14. 36	·1063					
11. 54	44. 35	14. 57	·1061					
12. 1	44. 35	15. 35	·1064					
12. 25	45. 15	17. 3	·1062					
12. 38	44. 25	18. 43	·1053					
13. 12	46. 0	19. 8	·1053					
13. 23	44. 35	20. 4	·1045					
13. 43	44. 25	21. 23	·1036					
14. 17	46. 0	22. 33	·1037					
14. 23	45. 5	23. 5	·1041					
14. 42	45. 45		(†)					
15. 4	43. 35							
15. 56	44. 20							
	***							
16. 38	43. 50							
16. 53	42. 45							
16. 59	43. 40							
17. 23	41. 30							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 18. The Declination and Horizontal Force cylinder was stopped from $10^h. 15^m.$ to $11^h. 17^m.$

June 19. The Declination and Horizontal Force cylinder was stopped from $2^h. 23^m.$ to $0^h. 0^m.$

June 19. HORIZONTAL FORCE. The photographic traces of the Horizontal Force and Declination Magnets were found to be inconveniently near. The adjustments of the Horizontal Force Magnet were therefore altered and the traces separated. The following corrections must be made to render the results obtained before June 19 comparable with those obtained during the remainder of the year. The results from the beginning of the year to February $3^d. 0^h. 49^m.$ must be increased by 0·0034; the results from February $3^d. 0^h. 49^m.$ to June $15^d. 21^h. 30^m.$ must be diminished by 0·0006; and the results from June $15^d. 21^h. 30^m.$ to June $18^d. 22^h. 31^m.$ must be diminished by 0·0066.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June19								
h m	° ′ ″	h m		h m		h m	°	°
17. 30	20. 42. 35							
17. 38	41. 25							
18. 0	42. 5							
18. 8	40. 55							
18. 14	41. 40							
18. 26	41. 5							
18. 50	41. 40							
18. 57	41. 25							
19. 13	42. 35							
19. 24	41. 35							
19. 54	42. 10							
20. 0	43. 20							
20. 12	43. 0							
20. 22	44. 35							
20. 32	43. 40							
21. 7	44. 30							
22. 30	49. 0							
23. 34	50. 50							
23. 59	51. 25							
June20		June20		June20		June20		
0. 0	20. 51. 25	0. 0	·1054	0. 0	·02450	1. 0	65 ·7	66 ·5
0. 50	52. 5	0. 32	·1047	2. 47	·02450	3. 0	67 ·3	68 ·4
1. 12	53. 0	0. 55	·1052	4. 56	·02340	Max.	70 ·0	71 ·0
3. 46	48. 10	1. 8	·1048	7. 54	·02088	9. 0	70 ·0	71 ·0
5. 48	46. 35	1. 39	·1055	9. 50	·02000	Min.	61 ·6	61 ·1
7. 30	46. 0	1. 46	·1054	13. 43	·02000	22. 0	63 ·5	64 ·8
9. 15	46. 20	2. 5	·1057	17. 10	·02160			
11. 51	43. 50	2. 54	·1059	20. 12	·02404			
12. 47	44. 0	3. 18	·1058	23. 59	·02480			
	(†)	3. 38	·1054					
13. 52	47. 40	4. 0	·1054					
	***	4. 24	·1063					
16. 56	46. 5	4. 51	·1064					
17. 30	44. 10	5. 17	·1061					
18. 5	44. 25	5. 43	·1061					
18. 13	43. 25	6. 25	·1068					
18. 38	44. 40	6. 54	·1066					
18. 52	43. 55	7. 17	·1068					
19. 23	44. 45	7. 38	·1065					
20. 27	42. 50	7. 52	·1066					
21. 36	43. 50	8. 45	·1061					
23. 24	50. 25	11. 20	·1059					
23. 59	51. 5	14. 20	·1061					
		15. 51	·1063					
		16. 46	·1062					
		16. 57	·1064					
		19. 7	·1058					
		20. 3	·1050					
		20. 22	·1049					
		20. 47	·1044					
			(†)					
		22. 0	·1041*					
		22. 55	·1037					
		23. 56	·1040					
		23. 59	·1041					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June21		June21		June21		June21		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 51. 5	0. 0	·1041	0. 0	·02480	Max.	72 ·6	74 ·6
0. 23	52. 35	0. 26	·1048	2. 30:	·02380	9. 0	71 ·4	72 ·2
1. 40	51. 25	0. 51	·1043	4. 54	·02097	18. 0	66 ·0	67 ·5
2. 35	51. 50	1. 17	·1045	6. 57	·01906	Min.	63 ·7	63 ·5
3. 26	49. 5	1. 37	·1042	9. 15	·01760	21. 0	65 ·0	66 ·5
4. 26	48. 45	1. 51	·1045	11. 31	·01813			
5. 25	49. 10	2. 3	·1045		·01833			
6. 32	48. 0	2. 41	·1054	13. 25	·01890			
9. 8	47. 55	3. 7	·1051	16. 45	·02100			
9. 21	47. 0	3. 16	·1051		·02120			
10. 8	47. 0	3. 30	·1047	20. 23	·02360			
11. 15	47. 35	4. 10	·1051	21. 35	·02410			
13. 16	46. 10	4. 29	·1045		(†)			
13. 31	46. 55	4. 52	·1052					
	***	5. 17	·1051					
14. 15	45. 5	5. 35	·1056					
14. 45	46. 20	6. 7	·1047					
15. 0	45. 5	6. 30	·1052					
15. 17	45. 50	7. 23	·1053					
	***	8. 48	·1048					
15. 45	43. 45	9. 5	·1051					
16. 30	44. 35	9. 12	·1048					
16. 44	42. 30	9. 50	·1051					
16. 50	43. 5	13. 13	·1056					
17. 10	39. 40	14. 2	·1062					
17. 27	40. 20	14. 29	·1061					
17. 33	41. 35		***					
18. 22	40. 20	18. 50	·1063					
18. 29	41. 10	19. 16	·1057					
18. 41	40. 5	19. 31	·1057					
18. 53	41. 40	19. 44	·1054					
19. 51	42. 25	20. 6	·1055					
21. 2	47. 35	20. 53	·1045					
21. 7	46. 40	21. 10	·1044					
21. 21	48. 45	21. 25	·1046					
21. 28	48. 5	22. 37	·1048					
21. 37	50. 20	23. 25	·1057					
	***	23. 53	·1053					
22. 28	48. 45	23. 59	·1054					
23. 9	49. 10							
23. 20	52. 30							
23. 43	53. 15							
23. 59	50. 55							
June22		June22				June22		
0. 0	20. 50. 55	0. 0	·1054			1. 0	65 ·8	..
1. 20	53. 10	0. 28	·1051			3. 0	67 ·0	..
1. 32	52. 30	0. 40	·1054			Max.	68 ·8	..
2. 12	54. 15	1. 3	·1049			9. 0	68 ·8	..
2. 53	52. 5	1. 5	·1045			18. 0	65 ·2	..
3. 54	50. 45	1. 15	·1049			Min.	63 ·4	..
4. 20	52. 5	1. 30	·1044			21. 0	66 ·0	..
4. 40	51. 45	1. 55	·1055					
4. 49	52. 50	2. 20	·1060					
5. 1	52. 35	2. 54	·1066					
5. 7	54. 15	3. 20	·1066					
	***	3. 39	·1071					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 22. The Vertical Force Magnet was removed for the purpose of re-determining the time of its vibration in the horizontal plane.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 22		June 22						
h m	° ′ ″	h m		h m		h m	°	°
5. 21	20. 55. 55	3. 46	·1069					
5. 30	20. 59. 10	4. 17	·1085					
5. 47	21. 0. 20	4. 23	·1080					
6. 11	20. 45. 0	4. 47	·1082					
6. 38	52. 35	5. 0	·1066					
7. 2	47. 35	5. 32	·1132					
7. 11	46. 20	5. 52	·1038					
7. 23	47. 15	6. 25	·1074					
7. 45	44. 5	6. 45	·1052					
7. 52	45. 35	7. 10	·1062					
8. 8	44. 20	7. 20	·1074					
8. 20	38. 45	7. 41	·1072					
8. 28	29. 35	7. 49	·1083					
8. 37	28. 30	7. 59	·1086					
8. 48	30. 40	8. 1	·1058					
8. 55	37. 20	8. 9	·1062					
9. 19	43. 15	8. 21	·1048					
9. 36	43. 25	8. 37	·1069					
9. 44	44. 25	8. 42	·1067					
9. 57	42. 20	8. 45	·1078					
9. 59	43. 55	9. 0	·1066					
10. 4	43. 0	9. 20	·1065					
10. 9	44. 15	9. 41	·1058					
10. 23	41. 40	9. 51	·1060					
10. 34	42. 55	10. 2	·1062					
10. 58	48. 15	10. 16	·1053					
11. 8	47. 30	10. 38	·1056					
11. 15	49. 0		***					
11. 24	46. 45	11. 8	·1062					
11. 33	48. 5	11. 23	·1052					
11. 43	46. 0	11. 52	·1070					
12. 0	48. 40	11. 58	·1062					
12. 9	46. 25	12. 2	·1063					
12. 17	48. 5	12. 8	·1057					
12. 33	47. 5	12. 15	·1060					
12. 48	44. 10	12. 28	·1060					
13. 1	45. 10	12. 36	·1064					
13. 9	48. 15	12. 45	·1065					
13. 18	46. 0	12. 53	·1062					
13. 25	47. 35	13. 11	·1070					
13. 36	45. 10	13. 30	·1063					
13. 46	41. 25	13. 37	·1065					
13. 57	45. 0	13. 53	·1054					
14. 6	45. 15	14. 1	·1062					
14. 25	51. 30	14. 8	·1054					
14. 32	48. 0	14. 22	·1063					
14. 38	49. 25	14. 29	·1057					
14. 53	44. 10	14. 52	·1078					
15. 0	44. 0	14. 56	·1072					
15. 10	41. 40	15. 4	·1072					
15. 43	53. 45	15. 34	·1047					
15. 50	56. 0	15. 43	·1055					
16. 17	50. 40	15. 52	·1056					
16. 27	50. 55	16. 0	·1067					
16. 36	49. 15	16. 13	·1065					
16. 45	50. 10	16. 20	·1070					
17. 8	47. 5		***					
17. 22	45. 20	17. 23	·1054					
			~					
June 22		June 22						
h m	° ′ ″	h m		h m		h m	°	°
17. 26	20. 45. 55	18. 0	·1056					
17. 34	43. 20	18. 22	·1054					
17. 40	44. 30	18. 38	·1055					
17. 45	43. 0	19. 25	·1046					
18. 8	43. 10	19. 34	·1038					
18. 35	41. 5	19. 45	·1044					
19. 1	41. 55	20. 13	·1022					
19. 27	41. 0	20. 29	·1035					
19. 37	43. 0	20. 34	·1027					
19. 40	40. 0	20. 44	·1034					
19. 48	43. 35	21. 3	·1016					
20. 4	45. 30	21. 23	·1042					
20. 18	40. 35	21. 26	·1024					
20. 36	48. 20	21. 37	·1026					
20. 46	47. 0	21. 53	·1012					
20. 56	49. 20	22. 32	·1033					
21. 19	46. 55	22. 44	·1027					
21. 25	48. 25	22. 55	·1040					
21. 33	44. 20	23. 0	·1029					
21. 42	47. 20	23. 8	·1030					
21. 44	40. 25	23. 15	·1043					
21. 53	42. 0		***					
21. 59	47. 30	23. 59	·1027					
22. 2	40. 0							
22. 14	51. 15							
22. 26	52. 45							
22. 42	48. 55							
22. 54	50. 30							
23. 7	52. 55							
23. 23	50. 30							
23. 38	54. 10							
23. 59	54. 0							
June 23		June 23				June 23		
0. 0	20. 54. 0	0. 0	·1027			1. 0	69·6	..
0. 4	53. 25	0. 7	·1026			3. 0	72·0	..
0. 7	54. 5	1. 30	·1058			Max.	74·8	..
0. 11	53. 0	2. 7	·1059			9. 0	74·0	..
0. 17	55. 0	2. 20	·1042			18. 0	68·8	..
0. 23	53. 50	2. 53	·1056			Min.	65·4	..
	***	3. 24	·1048			21. 0	67·0	..
1. 2	54. 45	4. 0	·1046			22. 0	66·6	..
1. 15	52. 40	4. 15	·1047			23. 0	66·8	..
1. 41	52. 20	5. 8	·1050					
2. 1	53. 10	5. 21	·1060					
2. 10	52. 5	5. 35	·1053					
2. 23	53. 35	5. 41	·1056					
2. 59	52. 55	5. 47	·1054					
3. 8	51. 55	6. 2	·1070					
	***	6. 16	·1062					
3. 46	51. 35	6. 46	·1064					
3. 58	50. 25	6. 59	·1059					
4. 28	50. 10	7. 20	·1066					
4. 50	48. 35	7. 34	·1062					
4. 57	49. 20	7. 53	·1064					
5. 7	47. 35	8. 1	·1070					
5. 36	48. 10	8. 22	·1070					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁚ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 23		June 23						
h m	° ′ ″	h m		h m		h m	°	°
5. 46	20. 45. 30	8. 37	·1065					
6. 48	47. 55	8. 53	·1071					
7. 4	47. 15	9. 19	·1065					
7. 20	48. 0	9. 53	·1067					
8. 26	46. 5	10. 5	·1059					
8. 42	42. 0	10. 38	·1061					
9. 22	44. 35	10. 47	·1065					
9. 36	43. 10	11. 9	·1061					
9. 54	44. 0	11. 52	·1062					
9. 59	44. 55	12. 43	·1070					
10. 23	44. 35	12. 59	·1067					
10. 47	45. 0	13. 6	·1072					
10. 56	45. 55	13. 37	·1062					
11. 14	44. 25	13. 45	·1067					
11. 26	46. 0	14. 10	·1064					
	***	14. 25	·1073					
12. 6	46. 35	14. 45	·1054					
12. 38	54. 10	15. 0	·1053					
13. 0	53. 0	15. 30	·1064					
	(†)	15. 39	·1064					
13. 19	45. 10	15. 52	·1068					
13. 29	46. 55		***					
13. 48	45. 35	16. 32	·1073					
14. 1	49. 0	16. 47	·1070					
14. 10	46. 55	17. 25	·1065					
14. 14	47. 45	17. 39	·1069					
14. 19	46. 0	18. 15	·1069					
14. 34	45. 10	18. 39	·1060					
14. 39	47. 15	19. 22	·1064					
15. 0	46. 55	19. 40	·1059					
15. 15	45. 10	19. 56	·1062					
15. 38	48. 50	20. 10	·1058					
15. 58	48. 55	20. 24	·1061					
16. 16	44. 35	20. 47	·1062					
16. 31	44. 0	21. 41	·1060					
16. 42	42. 45	22. 1	·1061					
17. 10	43. 40	22. 30	·1047					
17. 22	43. 0	22. 40	·1051					
17. 27	44. 10	22. 46	·1046					
17. 41	43. 25	23. 15	·1058					
17. 59	43. 30	23. 45	·1054					
18. 25	45. 50	23. 53	·1058					
18. 59	46. 0	23. 59	·1059					
19. 15	45. 25							
19. 29	43. 0							
19. 57	43. 5							
20. 5	42. 25							
20. 13	43. 30							
	***							
21. 8	44. 0							
21. 19	45. 0							
21. 49	44. 30							
21. 53	47. 0							
21. 58	45. 15							
22. 8	46. 20							
22. 16	53. 20							
22. 28	46. 55							
22. 37	49. 10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 23								
h m	° ′ ″	h m		h m		h m	°	°
22. 40	20. 47. 35							
22. 46	48. 35							
23. 11	48. 0							
23. 42	49. 5							
23. 47	48. 5							
23. 51	49. 45							
23. 59	50. 5							
June 24		June 24		June 24		June 24		
0. 0	20. 50. 5	0. 0	·1059		(†)	0. 0	67 ·4	70 ·3
0. 8	49. 20	0. 7	·1056	1. 0	·02863*	1. 0	68 ·2	70 ·2
0. 23	49. 55	0. 39	·1051	1. 11	·02900	2. 0	69 ·0	71 ·0
0. 30	49. 25	0. 53	·1043	3. 6	·02820	3. 0	70 ·4	72 ·0
0. 43	50. 0	1. 11	·1049	8. 0	·02560	6. 0	73 ·9	75 ·0
0. 53	49. 15		(†)	10. 51	·02550	Max.	74 ·9	75 ·8
1. 7	50. 35	2. 16	·1065	11. 34	·02514	9. 0	73 ·9	74 ·5
1. 18	50. 20	2. 44	·1068	13. 53	·02624	12. 0	73 ·0	74 ·0
1. 30	51. 20	2. 51	·1074	15. 49	·02760	18. 30	69 ·3	70 ·6
1. 53	49. 40	3. 2	·1072	19. 49	·03130	Min.	67 ·1	66 ·9
	***	3. 17	·1080	23. 59	·03163	21. 0	68 ·5	70 ·0
2. 37	51. 0	3. 37	·1072			22. 0	68 ·5	69 ·5
3. 11	50. 35	3. 44	·1074			23. 0	68 ·3	69 ·7
3. 19	51. 5	4. 0	·1071					
3. 40	49. 30	4. 9	·1076					
3. 56	50. 20	4. 18	·1073					
4. 39	48. 45	4. 40	·1073					
5. 16	48. 15	5. 15	·1089					
5. 53	42. 40	5. 36	·1074					
6. 21	46. 15	5. 48	·1088					
6. 37	44. 35	5. 53	·1086					
7. 0	44. 10	6. 16	·1099					
7. 11	45. 35	6. 32	·1092					
7. 34	45. 50	6. 38	·1093					
7. 58	44. 45	6. 51	·1083					
8. 42	45. 15	7. 8	·1076					
9. 6	46. 40	7. 24	·1084					
9. 16	45. 45	7. 32	·1083					
9. 37	45. 40	7. 40	·1087					
10. 4	42. 5	7. 47	·1080					
10. 22	45. 5	7. 51	·1085					
10. 47	46. 10	8. 6	·1077					
11. 7	51. 5		***					
11. 21	48. 10	8. 58	·1072					
11. 33	46. 55		***					
11. 41	44. 35	9. 34	·1078					
12. 4	43. 30	9. 47	·1075					
12. 28	43. 35	10. 8	·1080					
12. 41	42. 0	10. 29	·1074					
13. 8	42. 25	11. 2	·1085					
13. 14	43. 35	11. 23	·1084					
13. 41	45. 5	11. 45	·1074					
13. 47	43. 0		***					
14. 0	41. 20	12. 8	·1072					
14. 31	44. 0	12. 15	·1075					
14. 42	43. 25	12. 22	·1072					
15. 2	45. 35		***					
15. 10	46. 55	13. 45	·1073					
15. 22	45. 40	13. 55	·1070					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 24. The Vertical Force Magnet was carefully adjusted, and set to work.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 24		June 24						
h m	° ′ ″	h m		h m		h m	°	°
15. 30	20. 48. 45	14. 5	·1074					
15. 48	47. 25	14. 8	·1072					
16. 1	47. 35	14. 22	·1072					
16. 11	45. 5	14. 36	·1070					
16. 23	44. 25	14. 47	·1072					
16. 41	44. 40	15. 6	·1071					
16. 51	43. 5	15. 22	·1074					
17. 2	44. 0	15. 41	·1070					
17. 16	42. 15	16. 19	·1077					
17. 53	44. 10	16. 52	·1073					
17. 57	46. 0	17. 47	·1082					
18. 6	44. 20		***					
18. 14	46. 5	19. 0	·1060					
	***	19. 38	·1061					
18. 37	45. 25	20. 2	·1069					
18. 40	47. 0	20. 33	·1061					
18. 52	45. 0	20. 54	·1063					
18. 58	46. 15	21. 16	·1059					
19. 10	43. 30	21. 30	·1060					
19. 23	44. 25	21. 36	·1057					
19. 45	41. 5	21. 41	·1060					
20. 8	44. 10	21. 48	·1056					
20. 24	43. 0	21. 59	·1061					
20. 36	44. 15	22. 19	·1053					
20. 42	42. 10	22. 32	·1057					
20. 49	43. 20	22. 46	·1057					
20. 59	41. 45	22. 52	·1054					
21. 26	44. 50	23. 4	·1058					
21. 38	43. 45		(†)					
21. 52	46. 35							
22. 17	46. 15							
22. 39	48. 40							
23. 0	48. 55							
	***							
23. 59	51. 35							
June 25		June 25		June 25		June 25		
0. 0	20. 51. 35		(†)	0. 0	·03163	0. 0	68 ·1	69 ·3
	***	0. 37	·1059	3. 25:	·03100	1. 0	68 ·6	69 ·8
1. 32	51. 50	0. 43	·1058	6. 48	·02720	2. 0	69 ·3	70 ·7
1. 53	51. 10	0. 55	·1061	8. 59	·02680	3. 0	70 ·0	71 ·1
2. 3	52. 5	1. 18	·1062	10. 41	·02730	Max.	71 ·0	72 ·5
2. 19	52. 15	1. 39	·1056	12. 48	·02735	9. 0	71 ·0	71 ·9
2. 30	50. 25	2. 9	·1072	14. 28	·02860	18. 0	65 ·3	66 ·8
3. 18	51. 0	2. 10	·1070	17. 4	·03177	Min.	63 ·0	62 ·2
	***	2. 27	·1079	19. 35	·03270	21. 0	65 ·0	66 ·0
4. 50	47. 15	2. 42	·1061	23. 29	·03298			
5. 0	47. 30	3. 6	·1061	23. 59	·03285			
5. 29	45. 40	3. 12	·1069					
6. 7	45. 5		***					
6. 15	46. 20	3. 44	·1067					
6. 31	45. 40	4. 3	·1062					
6. 56	42. 30	4. 19	·1072					
7. 43	45. 55	4. 23	·1070					
8. 26	47. 10	4. 33	·1075					
8. 35	46. 40	4. 45	·1067					
9. 1	47. 15	4. 57	·1066					
9. 33	46. 30	5. 2	·1070					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 25		June 25						
h m	° ′ ″	h m		h m		h m	°	°
9. 42	20. 47. 10	5. 15	·1068					
	***	5. 48	·1078					
10. 21	44. 25	6. 3	·1074					
10. 30	45. 0	6. 12	·1077					
10. 37	44. 10	6. 27	·1074					
10. 56	46. 35	6. 57	·1081					
11. 28	46. 25	7. 16	·1092					
11. 38	47. 15	7. 48	·1076					
11. 51	46. 25	8. 4	·1079					
12. 8	50. 0	8. 45	·1074					
12. 27	46. 5	8. 53	·1079					
12. 37	47. 55	9. 13	·1072					
12. 58	44. 15	9. 23	·1075					
13. 22	43. 45	9. 39	·1074					
13. 42	46. 50	9. 49	·1077					
14. 0	44. 0	10. 1	·1074					
14. 16	45. 55	10. 14	·1080					
14. 50	46. 40	10. 30	·1077					
14. 54	48. 25	11. 0	·1079					
15. 16	48. 50	11. 10	·1081					
15. 36	50. 30	11. 26	·1076					
15. 50	47. 15	11. 37	·1079					
16. 13	43. 35	11. 59	·1076					
	***	12. 37	·1086					
17. 48	42. 20	13. 12	·1069					
17. 56	43. 55	13. 24	·1060					
18. 10	40. 45	13. 38	·1062					
18. 15	43. 0	14. 0	·1069					
18. 24	40. 40	14. 11	·1067					
18. 32	43. 10	14. 40	·1052					
18. 57	43. 0		***					
19. 6	41. 5	15. 12	·1065					
19. 24	42. 50	15. 17	·1065					
19. 55	41. 40	15. 34	·1077					
	***	15. 52	·1077					
20. 15	43. 55	16. 4	·1074					
20. 30	43. 5	16. 39	·1068					
20. 57	43. 40	17. 18	·1067					
21. 35	44. 40	17. 25	·1072					
21. 59	47. 0	17. 32	·1068					
22. 7	46. 45		***					
22. 41	50. 25	18. 6	·1073					
23. 34	53. 15	18. 14	·1064					
23. 42	52. 45		***					
	(†)	18. 49	·1067					
		19. 0	·1062					
		19. 17	·1065					
		19. 43	·1065					
		20. 7	·1059					
		20. 15	·1061					
		20. 38	·1058					
			***					
		22. 5	·1058					
		22. 17	·1062					
		23. 2	·1051					
		23. 39	·1058					
		23. 59	·1058					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 26		June 26		June 26		June 26		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	0. 0	·1058	0. 0	·03285	1. 0	68 ·5	69 ·0
0. 19	20. 52. 35	0. 18	·1054	2. 10:	·03000	3. 0	71 ·4	71 ·9
0. 53	52. 10	0. 32	·1056	3. 52	·02640	9. 0	72 ·2	73 ·0
1. 38	53. 40	0. 48	·1055	6. 50:	·02487	Max.	74 ·0	74 ·7
1. 45	52. 50	1. 9	·1057	9. 57	·02660	6. 0	69 ·5	72 ·0
2. 22	51. 5		(†)		·02687	18. 0	63 ·7	65 ·2
2. 47	50. 40	2. 24	·1069	12. 56	·02933	Min.	61 ·0	60 ·9
3. 17	49. 10	2. 43	·1079	14. 45	·03160	21. 0	62 ·3	63 ·0
3. 35	49. 35	2. 53	·1073	19. 19	·03360			
3. 53	48. 45	3. 6	·1081	23. 59	·03390			
4. 12	49. 30	3. 15	·1070					
4. 22	47. 30		***					
4. 42	47. 30	3. 34	·1072					
5. 8	46. 5		***					
5. 25	46. 25	3. 43	·1068					
5. 42	46. 0		***					
6. 31	47. 25	4. 12	·1075					
7. 30	45. 25	4. 21	·1067					
8. 27	48. 5	4. 39	·1073					
9. 1	45. 20		***					
9. 39	45. 30	5. 14	·1074					
9. 56	44. 35	5. 25	·1065					
10. 43	45. 10	6. 30	·1069					
11. 32	44. 50	6. 36	·1073					
12. 7	42. 35	6. 43	·1069					
12. 33	44. 30	7. 17	·1073					
13. 23	43. 10	7. 30	·1072					
15. 4	46. 35	7. 52	·1078					
15. 31	50. 0	8. 22	·1075					
16. 22	47. 40	8. 40	·1077					
16. 30	48. 20	9. 15	·1072					
17. 1	44. 5	9. 37	·1075					
17. 50	41. 50	10. 24	·1077					
17. 58	43. 0	10. 55	·1076					
18. 7	40. 30		(†)					
18. 53	41. 25	13. 7	·1078					
19. 8	40. 20	14. 7	·1084					
19. 25	43. 0	14. 39	·1085					
19. 54	42. 5	14. 54	·1081					
20. 0	43. 45	15. 17	·1088					
20. 7	42. 10	15. 44	·1088					
21. 0	43. 30	16. 14	·1097					
21. 28	42. 0	16. 48	·1091					
21. 37	43. 50	17. 43	·1088					
22. 31	46. 10	18. 8	·1089					
23. 0	49. 15	18. 33	·1083					
23. 15	49. 20	18. 40	·1086					
23. 41	50. 55	19. 23	·1076					
23. 59	51. 0	20. 45	·1081					
		20. 55	·1089					
		21. 2	·1084					
		21. 17	·1082					
		21. 44	·1073					
		22. 26	·1082					
		22. 34	·1081					
		22. 49	·1086					
		23. 21	·1085					
		23. 29	·1088					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		June 26				June 27		
h m	° ′ ″	h m		h m		h m	°	°
		23. 38	·1088					
			(†)					
June 27		June 27		June 27		June 27		
0. 0	20. 51. 0		(†)	0. 0	·03390	1. 0	63 ·3	64 ·7
0. 30	50. 25	0. 21	·1084	2. 41	·03390	3. 0	65 ·1	66 ·3
0. 45	51. 5	0. 38	·1081	3. 28	·03364	Max.	69 ·0	70 ·0
0. 56	50. 35	0. 52	·1086	8. 33	·02760	9. 0	69 ·0	70 ·0
1. 23	51. 50	1. 8	·1081		(†)	Min.	59 ·0	58 ·7
	***	1. 47	·1092	9. 0	·02658	22. 20	61 ·8	62 ·3
2. 24	52. 0	1. 54	·1096	14. 3	·02720			
3. 6	49. 20	2. 51	·1102	15. 25	·02860			
3. 30	48. 25	3. 2	·1093	18. 49	·03410			
3. 40	49. 25		(†)	20. 35	·03480			
3. 55	47. 40	3. 39	·1086	23. 59	·03465			
4. 13	48. 15	3. 47	·1091					
4. 24	47. 10	4. 7	·1091					
4. 42	47. 0	4. 23	·1085					
4. 52	45. 30	4. 40	·1093					
5. 25	46. 30	4. 55	·1095					
5. 48	45. 20	5. 5	·1100					
6. 2	46. 5	6. 15	·1087					
6. 12	44. 55	6. 34	·1089					
6. 27	45. 50	6. 40	·1086					
6. 52	43. 40	7. 0	·1092					
7. 17	46. 35	7. 29	·1087					
7. 33	46. 25	7. 39	·1079					
7. 46	43. 0	8. 15	·1104					
8. 19	47. 35	8. 32	·1084					
8. 40	47. 0	8. 52	·1081					
8. 51	44. 30	9. 7	·1082					
9. 11	46. 5	9. 22	·1075					
9. 44	44. 25	9. 43	·1084					
9. 52	45. 40	10. 22	·1076					
10. 25	45. 30	10. 42	·1082					
10. 41	46. 40	10. 57	·1076					
10. 57	44. 50	11. 45	·1073					
11. 12	44. 0	12. 10	·1076					
11. 18	44. 40	12. 37	·1073					
11. 28	44. 5	12. 52	·1078					
12. 41	49. 10	13. 17	·1076					
12. 52	48. 55	13. 33	·1078					
13. 17	49. 55	13. 55	·1074					
13. 33	47. 10	15. 8	·1079					
13. 52	51. 0	15. 29	·1076					
14. 52	47. 40	15. 53	·1079					
15. 18	44. 20	16. 44	·1084					
16. 6	45. 0	17. 28	·1075					
16. 23	43. 10	17. 49	·1077					
16. 37	44. 20	18. 15	·1075					
17. 4	42. 15	18. 36	·1077					
17. 57	43. 30	19. 0	·1071					
18. 8	42. 40	19. 18	·1071					
18. 33	44. 0	19. 43	·1075					
18. 56	43. 10	20. 17	·1073					
19. 35	46. 40	20. 30	·1075					
20. 4	44. 55	20. 47	·1073					
20. 23	46. 20	21. 15	·1073					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 27		June 27						
h m	° ′ ″	h m		h m		h m	°	°
20. 45	20. 45. 30	21. 40	·1059					
21. 23	46. 35	21. 52	·1060					
21. 43	48. 30	22. 7	·1058					
21. 53	47. 50	22. 30	·1059					
21. 59	49. 0	23. 0	·1048					
22. 16	48. 5	23. 12	·1057					
22. 48	48. 55	23. 39	·1062					
22. 57	48. 0		(†)					
23. 23	50. 0							
23. 59	50. 5							
June 28		June 28		June 28		June 28		
0. 0	20. 50. 5		(†)	0. 0	·03465	1. 0	63 ·9	64 ·8
0. 29	51. 15	0. 4	·1066	2. 15	·03340	Max.	67 ·7	68 ·7
0. 37	50. 35	0. 24	·1068	3. 27	·03220	9. 0	67 ·7	68 ·7
0. 58	51. 45	0. 41	·1063	9. 49:	·02630	18. 0	62 ·6	64 ·0
1. 6	51. 0	0. 54	·1066	20. 15	·03437	Min.	59 ·7	59 ·5
1. 23	52. 40	1. 2	·1064	23. 59	·03465	21. 0	61 ·5	63 ·2
1. 30	51. 35	1. 22	·1076					
1. 48	52. 10	1. 30	·1072					
2. 1	51. 15	1. 48	·1078					
2. 12	51. 55	2. 0	·1072					
2. 40	49. 35		***					
2. 51	50. 55	2. 33	·1070					
3. 0	50. 0	2. 47	·1079					
4. 10	51. 0	2. 55	·1077					
4. 34	48. 25	3. 0	·1071					
5. 22	45. 40	3. 9	·1070					
5. 30	46. 0	3. 30	·1064					
5. 44	44. 55	4. 1	·1073					
6. 23	46. 10	4. 10	·1080					
6. 53	46. 15	4. 19	·1077					
7. 3	45. 0	4. 25	·1081					
7. 12	45. 35	4. 47	·1076					
7. 37	44. 15	5. 5	·1078					
7. 52	45. 0	5. 17	·1070					
8. 14	42. 20	5. 31	·1081					
9. 0	45. 30	5. 38	·1083					
9. 53	44. 20	5. 46	·1088					
10. 8	44. 35	6. 8	·1078					
10. 25	43. 45	6. 24	·1078					
10. 52	43. 25	6. 28	·1073					
11. 19	44. 20	6. 36	·1077					
11. 56	43. 10	6. 45	·1072					
12. 31	45. 40	6. 54	·1080					
14. 0	46. 20	7. 14	·1080					
14. 15	47. 20	7. 27	·1075					
14. 32	47. 0	7. 53	·1076					
14. 45	48. 20	8. 2	·1073					
15. 8	47. 30	8. 39	·1081					
15. 29	47. 55	8. 55	·1088					
16. 1	45. 10	9. 40	·1074					
16. 25	44. 35	10. 0	·1072					
17. 19	41. 55	10. 8	·1076					
18. 29	42. 40	10. 18	·1072					
19. 5	41. 30	10. 31	·1074					
19. 53	43. 0	10. 42	·1072					
20. 26	41. 30	11. 23	·1074					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 28		June 28						
h m	° ′ ″	h m		h m		h m	°	°
21. 22	20. 43. 45	11. 58	·1071					
23. 22	51. 50	13. 21	·1074					
23. 59	52. 20	13. 43	·1072					
		14. 13	·1073					
		14. 39	·1070					
		15. 3	·1073					
		15. 37	·1073					
		16. 19	·1074					
		17. 23	·1070					
		17. 47	·1068					
		18. 36	·1060					
		19. 32	·1054					
		21. 45	·1057					
		21. 59	·1062					
		22. 8	·1060					
		22. 47	·1063					
		23. 9	·1061					
		23. 39	·1067					
			(†)					
June 29		June 29		June 29		June 29		
0. 0	20. 52. 20		(†)	0. 0	·03465	1. 0	64 ·0	65 ·3
1. 1	52. 15	0. 53	·1073	1. 20	·03355	3. 0	66 ·3	67 ·5
1. 40	52. 10	1. 44	·1074	5. 42	·02660	Max.	68 ·7	70 ·0
	(†)	3. 22	·1080	6. 30	·02640	9. 0	68 ·0	69 ·0
3. 0	51. 29*	4. 47	·1073	8. 36	·02570	18. 20	61 ·2	62 ·0
5. 50	46. 0	5. 6	·1070	12. 33	{·02685	Min.	59 ·0	58 ·6
6. 38	43. 40	5. 52	·1069		·02728	21. 0	61 ·0	61 ·9
7. 38	45. 20	6. 5	·1068	15. 0:	·02920			
9. 8	46. 10	6. 51	·1071	17. 5	{·03220			
9. 53	45. 25	7. 15	·1065		·03240			
11. 25	46. 10		***	18. 18	·03428			
13. 2	46. 40	8. 2	·1064	20. 57:	·03526			
	***	8: 15	·1065	23. 22	·03580			
14. 16	45. 5	8. 31	·1062	23. 59	·03475			
	***		(†)					
15. 10	45. 30	9. 0	·1064*					
15. 36	43. 45	12. 58	·1074					
	***	13. 25	·1072					
16. 37	42. 50	13. 38	·1073					
17. 7	41. 5	15. 21	·1068					
	***	17. 23	·1067					
19. 56	38. 10	18. 17	·1065					
20. 14	39. 5	18. 47	·1065					
20. 28	38. 40	19. 30	·1066					
21. 25	42. 20	20. 21	·1066					
22. 27	48. 10	21. 21	·1063					
23. 59	52. 45	21. 30	·1065					
		21. 40	·1063					
		22. 22	·1063					
			(†)					
June 30		June 30		June 30		June 30		
0. 0	20. 52. 45		(†)	0. 0	·03475	1. 0	64 ·4	65 ·0
0. 31	53. 15	0. 44	·1076	1. 0	·03410	3. 0	65 ·9	66 ·3
	***	1. 19	·1079	6. 28	·02688	Max.	67 ·3	68 ·3
2. 56	50. 20	1. 53	·1073	9. 55	·02560	9. 0	67 ·2	68 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 30 h m	° ′ ″	June 30 h m		June 30 h m		June 30 h m	°	°
3. 55	20. 50. 0	2. 15	·1077	13. 7	·02700	18. 0	61 ·5	62 ·8
4. 47	48. 0	3. 13	·1071		·02720	Min.	58 ·8	58 ·3
5. 4	48. 0	3. 55	·1079	14. 41	·02840	21. 0	64 ·2	62 ·0
5. 28	47. 0	4. 35	·1072	19. 18	·03480	22. 0	65 ·2	63 ·0
6. 45	45. 10	4. 48	·1064	21. 45:	·03523	23. 0	66 ·0	64 ·5
9. 19	45. 50	5. 1	·1063	23. 54	·03378			
9. 38	42. 40	5. 7	·1069	23. 59	·03360			
10. 22	42. 40	5. 30	·1060					
10. 34	43. 35	5. 39	·1062					
11. 3	43. 30	5. 47	·1061					
11. 13	44. 30		***					
11. 25	44. 15	6. 51	·1064					
11. 44	45. 20	7. 8	·1066					
12. 14	44. 30	7. 14	·1069					
12. 43	44. 50	7. 20	·1067					
13. 2	45. 45	7. 30	·1067					
13. 33	44. 30	7. 53	·1062					
14. 12	45. 50	8. 14	·1061					
15. 23	44. 15	8. 27	·1064					
16. 18	46. 30	8. 33	·1061					
16. 56	44. 15	8. 59	·1061					
17. 16	44. 15	9. 11	·1063					
17. 39	46. 30	9. 28	·1060					
18. 0	42. 0	9. 59	·1067					
18. 9	43. 10	10. 31	·1062					
18. 38	40. 0	10. 58	·1063					
19. 4	39. 5	11. 7	·1065					
19. 32	40. 55	11. 15	·1063					
20. 26	41. 5	13. 3	·1070					
20. 40	42. 20	13. 10	·1069					
20. 52	42. 0	13. 17	·1070					
21. 24	43. 30	13. 42	·1067					
21. 58	46. 30	13. 51	·1069					
22. 17	46. 20	14. 31	·1071					
22. 53	48. 25	15. 23	·1071					
23. 19	51. 5	15. 47	·1070					
23. 33	50. 40	16. 27	·1067					
23. 59	52. 45	16. 53	·1075					
		17. 21	·1075					
		17. 44	·1082					
		17. 58	·1077					
		18. 9	·1078					
		18. 28	·1080					
		19. 9	·1060					
		19. 25	·1063					
		19. 59	·1058					
		20. 9	·1055					
		20. 45	·1054					
		20. 52	·1051					
		21. 33	·1054					
		22. 12	·1060					
		22. 38	·1062					
		22. 54	·1060					
		23. 15	·1064					
		23. 38	·1056					
		23. 51	·1066					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 1 h m	° ′ ″	July 1 h m		July 1 h m		July 1 h m	°	°
0. 0	20. 52. 45		(†)	0. 0	·03360	0. 0	66 ·7	65 ·7
0. 30	54. 0	0. 8	·1069	4. 37	·02534	1. 0	67 ·7	67 ·0
0. 41	53. 25	0. 35	·1072	7. 30	·02360	2. 0	68 ·9	68 ·5
1. 17	53. 20	0. 42	·1069	9. 3	·02305	3. 0	69 ·7	69 ·7
2. 17	53. 35	1. 5	·1071		·02340	6. 0	72 ·0	72 ·7
3. 51	51. 10	1. 16	·1071	12. 42	·02360	Max.	72 ·5	73 ·8
4. 32	50. 35		***	13. 57	·02460	9. 0	72 ·3	73 ·0
5. 33	48. 35	1. 53	·1074	14. 57	·02560	12. 0	70 ·6	71 ·8
5. 52	49. 0	2. 13	·1073		·02590	18. 0	67 ·0	68 ·0
6. 13	47. 5	2. 25	·1077	17. 40	·02863	Min.	64 ·3	64 ·2
7. 5	47. 45		***	20. 10:	·03180	21. 0	65 ·6	67 ·0
7. 31	46. 35	2. 59	·1073	22. 37	·03220	22. 0	66 ·0	67 ·0
8. 1	46. 50		***	23. 59	·03210	23. 0	65 ·9	67 ·5
8. 10	46. 0	3. 37	·1067					
8. 52	47. 10		***					
9. 54	44. 35	4. 50	·1071					
10. 15	45. 30	5. 16	·1070					
10. 22	44. 50	5. 35	·1074					
10. 38	45. 40	5. 45	·1072					
10. 42	44. 30	6. 0	·1079					
11. 15	44. 10	6. 21	·1073					
11. 30	46. 55	6. 43	·1073					
11. 43	44. 15	6. 50	·1080					
11. 51	47. 20	7. 0	·1078					
12. 2	44. 5	7. 8	·1091					
12. 24	43. 50	7. 20	·1075					
12. 45	41. 30	7. 23	·1077					
13. 1	40. 40	7. 31	·1074					
13. 6	42. 0	7. 35	·1080					
13. 13	39. 50	8. 2	·1078					
13. 16	41. 15	8. 7	·1074					
13. 46	39. 15	8. 13	·1077					
	***	8. 24	·1080					
14. 28	41. 15	8. 30	·1087					
	***	8. 36	·1079					
15. 5	45. 50	8. 40	·1085					
15. 43	44. 30	8. 45	·1077					
15. 47	43. 30	8. 59	·1086					
16. 2	43. 30	9. 11	·1074					
16. 13	41. 15	9. 22	·1083					
16. 29	46. 20	9. 29	·1078					
16. 52	53. 10	9. 33	·1080					
17. 30	46. 30	9. 40	·1072					
18. 1	44. 35	9. 56	·1082					
18. 14	42. 10	10. 8	·1084					
18. 23	42. 0	10. 14	·1082					
19. 8	39. 0	10. 30	·1090					
19. 23	39. 40	10. 39	·1083					
19. 44	38. 15	10. 53	·1091					
20. 7	39. 50	11. 12	·1086					
20. 27	39. 0	11. 20	·1093					
21. 9	41. 5	11. 24	·1082					
22. 27	47. 20	11. 29	·1084					
22. 41	48. 30	11. 36	·1079					
23. 28	50. 0	11. 41	·1097					
23. 59	50. 55	11. 47	·1098					
		11. 57	·1082					
		12. 10	·1081					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	July 1 h m		h m		h m	°	°
		12. 17	·1075					
		12. 19	·1077					
		12. 38	·1059					
		12. 49	·1066					
		12. 57	·1062					
		13. 1	·1067					
		13. 15	·1064					
		13. 19	·1073					
		13. 37	·1073					
		13. 47	·1062					
		13. 58	·1070					
		14. 9	·1067					
		14. 23	·1072					
		14. 38	·1063					
		14. 43	·1067					
		14. 46	·1066					
		15. 13	·1072					
		15. 21	·1072					
		15. 38	·1076					
		15. 45	·1082					
		15. 53	·1080					
		16. 8	·1083					
		16. 15	·1075					
		16. 22	·1079					
		16. 31	·1078					
		16. 51	·1071					
		17. 40	·1082					
		18. 10	·1080					
		18. 23	·1083					
		18. 36	·1080					
		20. 2	·1072					
		20. 17	·1068					
		20. 34	·1067					
		21. 29	·1058					
		22. 29	·1055					
		22. 34	·1057					
		22. 45	·1056					
		23. 23	·1061					
		23. 53	·1063					
		23. 59	·1068					
July 2		July 2		July 2		July 2		
0. 0	20. 50. 55	0. 0	·1068	0. 0	·03210	0. 0	66 ·9	68 ·0
0. 52	52. 0	0. 7	·1070	2. 9	·03135	1. 0	67 ·5	68 ·9
1. 40	51. 30	0. 21	·1075	3. 40	·03020	2. 0	68 ·3	69 ·2
2. 0	51. 40	0. 35	·1073	6. 39	·02740	3. 0	69 ·0	70 ·0
2. 52	49. 35	0. 54	·1077	9. 5:	·02660	Max.	70 ·5	71 ·7
3. 1	50. 15	1. 10	·1076	11. 25	·02760	9. 0	70 ·0	71 ·0
3. 31	49. 25	1. 23	·1084	11. 39	·02750	18. 0	64 ·5	66 ·5
3. 45	47. 25	1. 39	·1078	13. 0	·02840	Min.	62 ·5	62 ·3
4. 8	46. 20	1. 54	·1088	14. 37	·02970	21. 0	64 ·0	65 ·2
4. 21	47. 25	2. 15	·1089	15. 18	{·03045 ·03070			
5. 2	46. 5	2. 29	·1086					
6. 0	46. 35	2. 38	·1091	10. 0	·03165			
6. 20	45. 0	2. 46	·1089	18. 26	{·03268 ·03284			
6. 40	45. 35	2. 50	·1095					
6. 58	43. 0	3. 2	·1089	20. 33	·03380			
7. 12	44. 30	3. 13	·1094	23. 59	·03350			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 2 h m	° ′ ″	July 2 h m		h m		h m	°	°
7. 15	20. 43. 20	3. 22	·1089					
7. 41	45. 0	3. 25	·1096					
7. 50	46. 5	3. 38	·1085					
7. 58	44. 20	3. 43	·1087					
8. 23	42. 0	3. 53	·1074					
8. 34	43. 15	4. 7	·1079					
8. 50	36. 25	4. 14	·1079					
9. 3	40. 30	4. 23	·1094					
9. 16	41. 45	4. 30	·1088					
9. 52	37. 50	4. 44	·1093					
10. 0	39. 0	5. 2	·1090					
10. 29	40. 20	5. 18	·1095					
10. 45	45. 5	5. 28	·1099					
11. 7	39. 5	5. 37	·1088					
11. 20	41. 0	5. 54	·1106					
11. 30	40. 25	6. 23	·1095					
12. 6	47. 0	6. 29	·1099					
12. 15	46. 5	6. 34	·1097					
13. 29	47. 55	6. 43	·1100					
	***	6. 55	·1090					
13. 58	45. 20	7. 8	·1099					
14. 10	46. 25	7. 18	·1090					
14. 30	41. 30	7. 34	·1101					
14. 38	43. 20	7. 44	·1097					
14. 45	42. 0	7. 53	·1102					
15. 0	44. 5	8. 8	·1091					
15. 9	43. 25	8. 16	·1104					
15. 27	48. 35	8. 23	·1099					
15. 46	45. 30	8. 31	·1099					
15. 58	48. 40	8. 40	·1092					
16. 12	47. 30	8. 52	·1097					
16. 21	45. 0	9. 12	·1086					
16. 24	45. 50	9. 21	·1086					
16. 36	45. 35	9. 28	·1090					
16. 42	43. 25	9. 40	·1087					
16. 48	44. 50	9. 54	·1080					
17. 1	41. 20	10. 23	·1090					
17. 6	43. 20	10. 36	·1086					
17. 8	40. 5		***					
17. 28	44. 0	10. 55	·1095					
17. 37	43. 5	11. 13	·1084					
17. 44	45. 0	11. 35	·1093					
17. 51	41. 15	12. 4	·1094					
	***	12. 19	·1096					
18. 2	46. 0		***					
18. 9	44. 25	13. 6	·1098					
18. 26	43. 45	13. 10	·1101					
18. 30	41. 55	13. 18	·1092					
18. 32	44. 40	13. 23	·1103					
18. 41	45. 40	13. 29	·1096					
18. 54	44. 0	13. 33	·1100					
18. 58	46. 5	13. 36	·1095					
19. 17	43. 45	13. 43	·1103					
	***	13. 47	·1099					
20. 2	43. 10	13. 54	·1102					
20. 37	45. 30	14. 1	·1095					
20. 47	43. 35	14. 11	·1099					
20. 53	46. 0	14. 44	·1092					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 2		July 2						
h m	° ′ ″	h m		h m		h m	°	°
21. 0	20. 44. 20	14. 48	·1096					
22. 12	47. 50	15. 0	·1094					
22. 18	47. 15	15. 11	·1097					
22. 31	48. 40	15. 16	·1092					
	***	15. 26	·1094					
23. 26	51. 10	15. 32	·1098					
23. 59	50. 30		***					
		16. 6	·1094					
		16. 9	·1089					
		16. 15	·1095					
		16. 23	·1086					
		16. 30	·1092					
		16. 33	·1080					
		16. 38	·1088					
			***					
		17. 17	·1088					
			***					
		17. 42	·1083					
		17. 47	·1086					
		18. 26	·1080					
		18. 40	·1081					
			***					
		19. 17	·1072					
		19. 38	·1071					
		19. 47	·1074					
		20. 17	·1067					
		20. 39	·1068					
		21. 3	·1059					
		21. 38	·1058					
		22. 11	·1067					
		22. 23	·1062					
			***					
		23. 0	·1068					
			(†)					
July 3		July 3		July 3		July 3		
0. 0	20. 50. 30		(†)	0. 0	·03350	1. 0	66 ·5	67 ·8
0. 54	51. 10	0. 45	·1076	3. 18:	·03145	3. 0	68 ·0	69 ·1
1. 4	53. 5	1. 4	·1084	5. 38	·02880	Max.	70 ·0	71 ·3
1. 17	52. 10	1. 13	·1082	8. 35:	·02483	9. 0	70 ·0	71 ·3
1. 30	52. 35	1. 30	·1078	11. 40	·02455	18. 0	66 ·0	67 ·3
1. 38	51. 25	1. 40	·1084	11. 57	·02440	Min.	62 ·8	62 ·5
1. 48	52. 45	1. 51	·1075	15. 0	·02580	21. 0	64 ·2	66 ·0
2. 1	50. 25	2. 13	·1082		·02604			
2. 13	51. 25	2. 21	·1080	17. 18	·02800			
2. 22	50. 25	2. 38	·1093	21. 29	·03320			
3. 32	49. 50	2. 44	·1090		·03200			
3. 50	50. 15	3. 21	·1089	23. 59	·03230			
5. 0	46. 45	3. 35	·1084					
5. 14	44. 30	3. 45	·1089					
6. 56	46. 45	3. 57	·1087					
	***	4. 9	·1080					
8. 33	45. 50	4. 45	·1083					
9. 4	46. 30	5. 7	·1079					
9. 49	45. 30	5. 23	·1087					
10. 0	46. 0	5. 37	·1084					
10. 38	45. 5	6. 0	·1087					
10. 54	45. 50	6. 16	·1083					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 3		July 3						
h m	° ′ ″	h m		h m		h m	°	°
11. 14	20. 44. 40	6. 53	·1082					
11. 27	48. 55	7. 7	·1076					
11. 37	49. 50	7. 22	·1078					
11. 58	47. 25	7. 30	·1075					
13. 8	44. 15	7. 45	·1079					
13. 16	44. 30	8. 20	·1074					
13. 22	43. 10	8. 46	·1078					
14. 5	43. 55	9. 1	·1075					
14. 26	45. 45	9. 30	·1076					
14. 35	48. 0	9. 38	·1074					
14. 50	48. 0	10. 17	·1078					
15. 0	49. 25	10. 36	·1075					
16. 2	44. 30	10. 51	·1080					
16. 13	45. 20	11. 9	·1078					
17. 33	41. 50	11. 25	·1086					
18. 11	40. 35	11. 38	·1086					
18. 22	41. 20	11. 56	·1080					
	***	12. 42	·1079					
19. 8	39. 45	13. 1	·1080					
19. 23	41. 0	13. 13	·1081					
	***	13. 35	·1081					
20. 0	40. 0	15. 11	·1075					
20. 35	43. 5	15. 42	·1082					
20. 40	42. 15	16. 8	·1077					
22. 42	50. 10	17. 43	·1083					
23. 20	49. 45	19. 16	·1075					
23. 30	50. 45	20. 7	·1068					
23. 59	51. 0	20. 19	·1068					
		20. 45	·1063					
		20. 57	·1066					
		21. 57	·1065					
		22. 17	·1062					
		22. 30	·1065					
		23. 2	·1063					
			(†)					
July 4		July 4		July 4		July 4		
0. 0	20. 51. 0		(†)	0. 0	·03230	1. 0	66 ·6	67 ·8
1. 3	52. 50	0. 28	·1077	1. 10	·03220	3. 0	69 ·0	69 ·9
2. 25	51. 5	1. 44	·1084	2. 12	·03140	Max.	72 ·7	73 ·7
3. 2	49. 25	2. 7	·1089	5. 54	·02636	9. 0	72 ·7	73 ·7
3. 55	48. 0	2. 30	·1089	9. 13	·02460	Min.	63 ·8	63 ·2
4. 44	47. 10	3. 26	·1092		·02480	22. 37	65 ·8	67 ·5
5. 0	46. 10	3. 44	·1089	13. 43:	·02550			
5. 10	46. 35	4. 38	·1090	17. 49	·03125			
6. 0	45. 10	5. 1	·1083	20. 41	·03244			
7. 33	44. 15	5. 8	·1086	23. 59	·03270			
7. 52	45. 5	5. 18	·1084					
8. 0	44. 25	5. 41	·1087					
9. 32	44. 25	5. 52	·1085					
9. 38	44. 50	6. 36	·1084					
9. 52	43. 45	6. 50	·1080					
10. 29	43. 45	6. 58	·1083					
10. 51	42. 55	7. 18	·1082					
11. 14	45. 5	7. 25	·1080					
11. 33	44. 0	7. 39	·1080					
11. 52	44. 25	7. 48	·1084					
13. 22	41. 55	7. 59	·1081					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 4		July 4						
h m	° ′ ″	h m		h m		h m	°	°
14. 44	20. 46. 35	8. 17	·1080					
15. 39	46. 10	8. 29	·1075					
17. 39	41. 10	8. 53	·1073					
18. 57	42. 0	9. 8	·1074					
20. 22	41. 0	9. 33	·1078					
21. 28	42. 15	9. 45	·1076					
22. 7	44. 40	10. 44	·1076					
22. 23	45. 0	10. 54	·1078					
22. 58	47. 30	11. 15	·1075					
23. 7	47. 0	11. 34	·1077					
23. 14	48. 25	12. 31	·1076					
23. 59	49. 10	13. 7	·1076					
		13. 25	·1077 (†)					
		14. 36	·1078					
		16. 38	·1087					
		17. 58	·1084					
		18. 45	·1082					
		20. 23	·1072					
		21. 44	·1067					
		21. 58	·1068					
		22. 11	·1067					
		22. 30	·1065					
		23. 10	·1069					
		23. 23	·1073					
		23. 46	·1072					
		23. 59	·1067					
July 5		July 5		July 5		July 5		
0. 0	20. 49. 10	0. 0	·1067	0. 0	·03270	Max.	75 ·0	75 ·7
0. 53	51. 30	0. 16	·1068	0. 59:	·03230	9. 42	73 ·4	74 ·2
1. 0	51. 10	0. 50	·1074	2. 45	·02960	18. 0	66 ·2	67 ·8
1. 26	52. 15	1. 25	·1081	5. 5	·02513	Min.	63 ·6	63 ·3
2. 19	51. 25	1. 55	·1077	8. 49	·02326	21. 0	69 ·0	67 ·2
3. 1	49. 55	2. 38	·1082	9. 43	·02320			
4. 37	47. 50	3. 14	·1083	13. 6	·02555			
5. 26	47. 45	3. 22	·1082	15. 0	·02770			
5. 40	47. 25	4. 56	·1082	17. 10	·03125			
6. 38	47. 15	5. 7	·1081	18. 49	{·03222			
7. 28	46. 10	5. 37	·1083		·03196			
7. 37	46. 35	6. 30	·1075	21. 10	{·03270			
8. 43	45. 35	6. 42	·1077		·03060			
	***	6. 51	·1075	22. 35	·03080			
9. 36	47. 35	7. 17	·1075	23. 59	·02940			
9. 43	46. 15	7. 25	·1076					
10. 30	47. 0	7. 37	·1074					
11. 21	46. 25	8. 12	·1072					
11. 48	47. 15	9. 36	·1072					
12. 10	46. 10	10. 31	·1075					
	***	11. 0	·1076					
15. 17	47. 5	11. 46	·1074					
	***	13. 51	·1072					
15. 51	44. 50	14. 43	·1077					
	***	14. 53	·1077					
17. 48	41. 55	16. 30	·1083					
18. 2	42. 25	17. 56	·1083					
18. 21	41. 15	18. 16	·1082					
18. 38	42. 5	18. 35	·1082					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 5		July 5						
h m	° ′ ″	h m		h m		h m	°	°
19. 17	20. 40. 20	20. 8	·1065					
19. 27	39. 10	22. 30	·1059					
19. 38	39. 10	23. 15	·1056					
19. 45	40. 5	23. 59	·1062					
20. 21	40. 10							
22. 13	43. 40							
22. 38	45. 45							
23. 59	50. 5							
July 6		July 6		July 6		July 6		
0. 0	20. 50. 5	0. 0	·1062	0. 0	·02940	1. 0	72 ·3	71 ·7
2. 4	53. 40	0. 16	·1049	4. 25:	·02500	3. 0	74 ·0	74 ·0
4. 17	50. 5	0. 46	·1050	8. 8	·02380	6. 0	75 ·2	75 ·8
5. 10	50. 5		(†)	9. 45	·02460	Max.	75 ·6	75 ·8
6. 50	46. 0	1. 0	·1065*	13. 28	·02730	9. 12	72 ·9	74 ·2
7. 17	46. 0	2. 0	·1072	14. 50	·02860	18. 0	66 ·7	68 ·2
	***	2. 30	·1073	15. 0	·02860	Min.	64 ·6	64 ·3
8. 19	44. 25	3. 12	·1081	19. 15	·03126	21. 0	70 ·0	69 ·0
9. 23	45. 10	4. 19	·1083	20. 45	·03155			
9. 40	43. 30	4. 33	·1085	20. 49	·03127			
9. 53	43. 35	5. 7	·1086	21. 35	·03160			
10. 8	42. 35	5. 15	·1084	22. 17	{·03125			
10. 37	43. 5	6. 9	·1084		·02880			
10. 57	41. 30	6. 21	·1073	23. 59	·02684			
11. 8	42. 0	6. 27	·1074					
11. 58	41. 0	6. 35	·1073					
12. 8	40. 5	7. 9	·1083					
12. 27	41. 30	8. 0	·1081					
12. 37	41. 10	8. 17	·1075					
12. 49	42. 25	8. 30	·1079					
13. 22	39. 30		***					
13. 53	46. 40	9. 4	·1076					
14. 13	46. 55	9. 30	·1080					
14. 45	41. 30	10. 2	·1079					
15. 43	46. 30	10. 25	·1083					
16. 10	46. 35	10. 59	·1077					
16. 18	45. 40	11. 21	·1080					
16. 28	45. 40	11. 30	·1078					
16. 46	39. 45	12. 48	·1082					
17. 12	39. 5	13. 6	·1079					
17. 22	40. 45	13. 25	·1078					
17. 28	40. 5	14. 22	·1095					
17. 40	42. 10	15. 15	·1076					
17. 47	41. 20	15. 44	·1092					
17. 55	42. 5	16. 6	·1092					
18. 3	40. 30	16. 26	·1082					
18. 22	40. 55	17. 22	·1082					
18. 40	39. 10	17. 45	·1080					
19. 15	39. 5	18. 0	·1079					
20. 32	41. 10	18. 41	·1067					
20. 40	39. 45	19. 6	·1066					
21. 3	42. 50	19. 23	·1061					
21. 29	43. 0	19. 47	·1065					
21. 42	44. 30	20. 9	·1071					
21. 56	44. 0	20. 45	·1073					
22. 3	45. 55	21. 13	·1075					
22. 13	45. 25	21. 30	·1072					
22. 30	47. 15	22. 3	·1070					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 6		July 6						
h m	° ′ ″	h m		h m		h m	°	°
23. 2	20. 49. 25	22. 21	·1076					
23. 19	49. 5	22. 48	·1070					
23. 59	52. 20	23. 20	·1072					
		23. 30	·1060					
		23. 59	·1063					
July 7		July 7		July 7		July 7		
0. 0	20. 52. 20	0. 0	·1063	0. 0	·02684	1. 0	75·2	74·9
0. 27	51. 45	0. 13	·1060	0. 30	·02580	3. 0	77·0	77·2
0. 42	50. 30	0. 37	·1059	5. 18	·02276	6. 0	78·7	79·0
1. 30	50. 25	1. 4	·1065	6. 37	·02250	Max.	79·0	79·5
2. 12	52. 35	1. 32	·1062	7. 40	·02197	9. 0	77·3	78·0
2. 20	52. 10	2. 7	·1063	8. 41	·02190	18. 0	69·5	71·0
2. 48	53. 40	2. 23	·1058	12. 15	·02340	Min.	64·7	63·8
3. 47	52. 30	2. 53	·1065	13. 53	·02490	21. 0	66·7	68·2
4. 14	52. 55	3. 10	·1062	16. 0	·02810	22. 0	66·8	68·3
4. 30	51. 5	3. 22	·1066	18. 46	·03030	23. 0	67·0	68·3
4. 50	50. 30	3. 33	·1066	21. 19	·03147			
5. 0	49. 5	3. 45	·1072	23. 59	·03200			
5. 7	49. 0	3. 53	·1068					
5. 22	45. 50		***					
5. 40	47. 40	4. 30	·1078					
5. 52	47. 0	4. 47	·1076					
6. 22	42. 10	5. 18	·1057					
6. 33	43. 10	5. 45	·1068					
6. 41	42. 10	6. 11	·1057					
7. 0	45. 15	6. 25	·1056					
7. 41	46. 30	6. 32	·1061					
8. 22	46. 0	6. 44	·1059					
8. 38	40. 40	6. 53	·1066					
9. 7	39. 15	7. 15	·1067					
9. 23	42. 5	7. 26	·1064					
9. 37	42. 45	7. 58	·1061					
9. 43	42. 0	8. 10	·1064					
10. 18	42. 25	8. 53	·1061					
11. 5	45. 0	9. 22	·1058					
11. 53	44. 5	9. 47	·1053					
12. 8	43. 35	10. 7	·1052					
12. 16	44. 30	10. 34	·1058					
13. 10	44. 25	10. 48	·1057					
13. 21	45. 20	10. 53	·1059					
13. 35	43. 50	11. 32	·1056					
13. 38	44. 15	11. 38	·1059					
13. 42	43. 10	11. 54	·1059					
13. 54	45. 30	12. 8	·1055					
14. 17	43. 25	12. 42	·1056					
14. 40	43. 5	13. 0	·1060					
15. 10	48. 45	13. 16	·1058					
16. 8	42. 50	13. 32	·1060					
16. 31	41. 30	14. 3	·1059					
16. 36	43. 10	14. 14	·1063					
16. 47	41. 20	14. 20	·1062					
17. 2	43. 5	15. 0	·1062					
17. 28	42. 35	15. 13	·1067					
17. 36	44. 25	15. 18	·1066					
17. 43	41. 55	15. 34	·1072					
17. 59	41. 10	15. 46	·1072					
18. 7	42. 30	16. 34	·1065					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 7		July 7						
h m	° ′ ″	h m		h m		h m	°	°
18. 43	20. 40. 30	16. 40	·1068					
18. 53	43. 35	16. 49	·1063					
	***	17. 8	·1062					
20. 29	39. 35	17. 23	·1066					
	***	18. 1	·1061					
21. 28	42. 15	18. 9	·1063					
22. 8	45. 50	18. 18	·1060					
23. 1	46. 30	18. 47	·1055					
23. 15	48. 25	18. 59	·1063					
23. 24	48. 20	19. 29	·1066					
23. 48	51. 0	19. 52	·1070					
23. 59	51. 10	20. 44	·1071					
		20. 53	·1069					
		21. 30	·1072					
		22. 10	·1062					
		22. 23	·1061					
		22. 39	·1064					
		22. 47	·1062					
		23. 0	·1062					
		23. 20	·1060					
		23. 59	·1070					
July 8		July 8		July 8		July 8		
0. 0	20. 51. 10	0. 0	·1070	0. 0	·03200	0. 0	67·8	69·0
0. 24	50. 45	0. 31	·1056	1. 22	·03175	1. 0	68·9	69·8
0. 52	52. 35	0. 54	·1069	4. 4	·03200	2. 0	69·7	70·8
1. 2	51. 5	1. 7	·1061	5. 27	·02930	3. 0	70·0	71·3
1. 17	52. 35	1. 22	·1072	6. 45	·02807	7. 30	72·0	72·3
1. 27	51. 55	1. 31	·1068	9. 24	·02720	Max.	72·0	72·3
1. 38	52. 50	1. 50	·1079	12. 55	·02783	9. 0	71·0	72·0
1. 56	52. 0	2. 11	·1073	14. 56	·02920	12. 0	70·5	71·7
2. 6	52. 30	2. 21	·1073	17. 11	·03160	18. 0	66·9	68·0
2. 19	52. 25	2. 56	·1059	18. 24	·03197	Min.	64·2	64·0
2. 31	50. 55	3. 30	·1075		·02950	21. 0	65·8	67·0
2. 52	50. 5	3. 39	·1070	19. 45	·03025	22. 0	66·8	67·6
3. 26	52. 10	3. 49	·1071		·02880	23. 0	67·9	68·2
		4. 4	·1067	21. 45	·02990			
4. 0	50. 5	4. 21	·1075		·02900			
4. 13	50. 40	4. 30	·1075	23. 59	·02895			
4. 22	49. 20	4. 45	·1087					
4. 33	50. 5		***					
4. 58	48. 10	5. 15	·1081					
5. 2	49. 0	5. 33	·1089					
5. 15	42. 0		***					
		6. 38	·1076					
6. 47	47. 0	6. 51	·1077					
7. 2	46. 20	6. 59	·1081					
		7. 23	·1074					
8. 36	47. 10	7. 40	·1072					
8. 53	46. 5	7. 58	·1076					
8. 58	47. 5	8. 32	·1073					
9. 19	48. 40	8. 51	·1075					
9. 33	45. 0	9. 8	·1070					
10. 4	44. 5	9. 26	·1079					
11. 12	45. 35	9. 51	·1071					
12. 37	47. 30	10. 25	·1065					
12. 51	45. 40	10. 46	·1066					
13. 6	45. 10	11. 38	·1064					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 8		July 8						
h m	° ′ ″	h m		h m		h m	°	°
13. 22	20. 43. 55	11. 53	·1068					
13. 48	45. 30	12. 5	·1076					
15. 16	42. 25	12. 24	·1077					
15. 47	43. 25	12. 55	·1066					
16. 0	42. 50	13. 15	·1062					
16. 58	42. 50	13. 38	·1069					
17. 10	41. 25	14. 4	·1069					
17. 15	42. 30	14. 37	·1065					
17. 30	40. 50	14. 52	·1068					
17. 43	39. 30	15. 7	·1063					
17. 57	42. 0	15. 18	·1066					
18. 22	39. 5	15. 29	·1066					
18. 45	39. 30	16. 37	·1071					
18. 57	41. 5	17. 17	·1067					
19. 7	39. 0	17. 30	·1070					
19. 24	40. 55	18. 10	·1062					
19. 53	38. 0	18. 34	·1064					
20. 22	39. 55	18. 59	·1059					
20. 39	39. 35	19. 14	·1062					
21. 23	43. 0	19. 31	·1058					
21. 55	43. 25	19. 49	·1061					
22. 14	45. 0	20. 8	·1059					
23. 8	52. 5	20. 23	·1059					
23. 22	50. 35	21. 0	·1052					
23. 59	50. 40	21. 35	·1047					
		22. 0	·1049					
			(†)					
July 9		July 9		July 9		July 9		
0. 0	20. 50. 40		(†)	0. 0	·02895	0. 0	69·5	69·7
0. 28	50. 45	0. 48	·1062	3. 55	·02560	1. 0	70·5	70·9
0. 59	52. 20	1. 0	·1058	7. 45	·02338	3. 0	73·5	73·8
1. 23	51. 10	1. 14	·1059	8. 45	·02310	Max.	76·8	77·7
1. 29	52. 15	1. 22	·1052	14. 0	·02570	9. 0	74·5	75·7
1. 50	53. 5	1. 56	·1067	15. 43	·02880	18. 0	68·0	68·7
2. 8	53. 0	2. 8	·1062	16. 34	·02920	Min.	64·0	63·5
2. 16	53. 30	2. 16	·1066	18. 10	·03080	21. 0	66·0	66·9
2. 39	53. 15	2. 49	·1046	21. 52	{·03240			
2. 45	52. 30	3. 6	·1058		{·03180			
3. 0	53. 30	3. 14	·1052	22. 23	·03183			
3. 16	51. 5	3. 38	·1056	23. 25	·03140			
3. 38	51. 35	3. 52	·1047	23. 59	·03096			
3. 56	48. 30	4. 1	·1050					
4. 17	50. 20	4. 42	·1066					
4. 44	50. 20	4. 52	·1070					
4. 52	49. 15	5. 0	·1070					
5. 0	50. 0	5. 29	·1086					
5. 28	48. 10	5. 36	·1082					
5. 42	48. 10	5. 45	·1082					
5. 51	51. 5	5. 50	·1072					
6. 0	47. 25	6. 29	·1073					
6. 39	40. 30	6. 45	·1061					
6. 47	41. 25	7. 4	·1064					
6. 52	40. 30	7. 20	·1055					
7. 17	46. 5		(†)					
7. 38	46. 0	9. 0	·1062*					
8. 14	48. 5	21. 0	·1037*					
8. 21	47. 0	23. 5	·1084					
			***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 9		July 9						
h m	° ′ ″	h m		h m		h m	°	°
8. 52	20. 48. 5	23. 37	·1090					
9. 12	46. 35	23. 53	·1086					
10. 4	46. 0	23. 59	·1089					
10. 23	47. 0							
10. 30	46. 25							
10. 43	46. 30							
11. 5	43. 5							
11. 34	44. 20							
11. 41	43. 25							
12. 10	43. 35							
12. 18	42. 0							
12. 30	43. 10							
12. 58	40. 15							
	(†)							
14. 11	36. 10							
14. 41	42. 55							
15. 7	44. 40							
15. 23	41. 5							
15. 38	41. 0							
16. 11	49. 5							
16. 23	47. 45							
16. 31	49. 15							
16. 48	45. 10							
16. 58	47. 10							
17. 14	42. 15							
17. 27	44. 50							
17. 36	43. 25							
17. 40	44. 50							
17. 46	43. 30							
17. 54	44. 50							
18. 19	41. 5							
18. 45	45. 0							
18. 59	42. 50							
19. 6	43. 50							
19. 16	42. 20							
19. 22	44. 15							
19. 27	42. 25							
19. 33	43. 25							
20. 28	44. 30							
20. 37	45. 55							
20. 46	45. 20							
20. 51	47. 30							
20. 57	47. 5							
21. 8	48. 45							
21. 47	49. 5							
21. 53	50. 0							
22. 2	49. 30							
22. 28	49. 10							
22. 43	49. 45							
22. 45	49. 10							
23. 1	49. 0							
23. 17	49. 35							
23. 22	50. 55							
23. 33	50. 15							
23. 37	51. 25							
23. 59	52. 5							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

HORIZONTAL FORCE. On July 9, the trace was lost from 8^h; on July 10, it was lost from $8^h.\ 37^m$; on July 11, the trace was entirely lost.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 10		July 10		July 10		July 10		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 52. 5	0. 0	·1089	0. 0	·03096	1. 0	71 ·5	71 ·9
	***	0. 4	·1085	2. 27	·02650	3. 0	75 ·2	75 ·2
0. 53	54. 30	0. 10	·1091	6. 3	·02305	6. 30	77 ·7	78 ·0
1. 23	52. 0	0. 26	·1093	9. 15	·02206	Max.	79 ·6	80 ·0
1. 41	54. 0	0. 37	·1090	12. 29	·02450	9. 0	76 ·0	77 ·0
1. 53	52. 5	0. 50	·1094	14. 16	·02640	18. 30	67 ·8	69 ·0
2. 9	52. 0	1. 21	·1078	14. 57	·02755	Min.	65 ·2	64 ·7
2. 44	48. 45	1. 39	·1091	18. 53	·03006	21. 0	66 ·8	67 ·6
3. 18	48. 30	2. 0	·1074	23. 23	·03155			
3. 29	49. 0	2. 13	·1082	23. 59	·03135			
3. 48	48. 10	2. 20	·1081					
4. 22	47. 50	2. 38	·1086					
4. 33	48. 20	2. 50	·1083					
4. 45	47. 20	3. 0	·1076					
4. 56	47. 50	3. 12	·1079					
5. 7	46. 55	3. 20	·1078					
5. 19	47. 35	3. 37	·1080					
6. 24	45. 30	3. 45	·1076					
6. 37	46. 25	3. 57	·1080					
6. 46	44. 50	4. 13	·1078					
7. 0	44. 25	4. 32	·1084					
7. 10	40. 30	4. 58	·1077					
7. 28	44. 10	5. 16	·1088					
7. 38	42. 0	5. 27	·1084					
7. 50	44. 0	5. 37	·1088					
	***	5. 47	·1087					
9. 18	45. 10	6. 17	·1089					
10. 0	44. 45	6. 28	·1093					
10. 12	44. 0	7. 0	·1080					
	***	7. 14	·1101					
13. 2	43. 25	7. 29	·1091					
13. 25	43. 45	7. 42	·1098					
13. 41	46. 15	7. 53	·1093					
13. 48	45. 0	8. 37	·1084					
14. 5	47. 45		(†)					
15. 10	44. 25	9. 0	·1087*					
	***	21. 0	·1080*					
16. 24	42. 40							
16. 50	41. 30							
16. 58	42. 50							
17. 36	40. 25							
17. 46	41. 40							
18. 50	39. 45							
19. 9	41. 15							
19. 30	43. 0							
19. 47	42. 5							
20. 21	42. 20							
20. 48	43. 40							
20. 55	43. 20							
21. 6	44. 45							
21. 21	44. 15							
21. 52	45. 45							
22. 14	46. 15							
23. 59	51. 5							
July 11		July 11		July 11		July 11		
0. 0	20. 51. 5	1. 0	·1085*	0. 0	·03135	1. 0	71 ·3	71 ·8
0. 20	51. 40	3. 0	·1092*	1. 21	·03000	3. 0	74 ·1	74 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 11		July 11		July 11		July 11		
h m	° ′ ″	h m		h m		h m	°	°
0. 33	20. 50. 5	9. 0	·1095*	3. 55	·02435	6. 0	76 ·0	75 ·7
0. 53	52. 0	22. 6	·1075*	6. 12	·02300	Max.	76 ·1	77 ·0
1. 2	51. 0			8. 26:	·02217	9. 0	74 ·2	74 ·7
1. 7	52. 20			10. 24	·02400	Min.	64 ·6	64 ·0
1. 23	51. 25			11. 15	·02405	22. 6	66 ·7	67 ·2
1. 57	52. 35			12. 45	·02520			
2. 28	52. 35				·02540			
2. 40	51. 45			14. 45	·02730			
2. 52	52. 10			16. 3	·02920			
3. 8	50. 35			20. 33	·03190			
3. 27	50. 40			22. 41	·03228			
3. 54	48. 40			23. 15	·03220			
4. 15	49. 0			23. 59	·03177			
4. 27	47. 55							
4. 37	48. 10							
5. 15	47. 0							
5. 45	42. 5							
	***							
7. 9	46. 0							
	***							
8. 22	46. 40							
8. 44	45. 5							
9. 8	47. 5							
9. 22	45. 10							
9. 46	44. 0							
10. 11	45. 40							
10. 18	45. 35							
10. 32	49. 30							
10. 40	48. 35							
10. 47	49. 0							
10. 53	48. 20							
11. 7	49. 0							
11. 26	46. 0							
11. 41	46. 15							
11. 53	45. 0							
12. 27	44. 30							
12. 34	46. 5							
12. 58	44. 35							
13. 17	45. 55							
13. 57	44. 30							
15. 29	48. 5							
15. 47	48. 0							
16. 23	44. 0							
16. 56	42. 0							
17. 5	43. 25							
17. 15	41. 30							
17. 29	42. 35							
17. 36	41. 50							
17. 57	42. 0							
18. 2	41. 10							
18. 13	42. 20							
18. 37	41. 15							
19. 20	42. 40							
19. 37	41. 0							
19. 56	41. 40							
20. 7	43. 5							
20. 16	42. 20							
20. 58	43. 55							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 11								
h m	° ′ ″	h m		h m		h m	°	°
21. 23	20. 45. 30							
21. 55	45. 55							
23. 14	50. 45							
23. 32	51. 0							
23. 59	51. 55							
July 12		July 12		July 12		July 12		
0. 0	20. 51. 55		(†)	0. 0	·03177	1. 0	70·9	71·0
0. 21	52. 15	1. 8	·1076	0. 55:	·03100	Max.	82·0	80·8
0. 30	51. 30	1. 21	·1077	1. 43	·02980	8. 30	79·0	77·7
0. 59	52. 30	1. 29	·1073	4. 10	·02370	18. 0	70·7	71·5
2. 8	51. 15	1. 57	·1075	9. 11:	·02135	Min.	67·8	67·6
2. 15	51. 30	2. 24	·1085	13. 34	{·02375	21. 0	69·0	70·0
3. 4	49. 30	2. 45	·1086		{·02397			
4. 6	49. 25	3. 10	·1083	17. 24	·02925			
5. 15	48. 0	3. 48	·1083	19. 48	·03040			
6. 41	45. 25	4. 6	·1084	22. 56	{·03100			
7. 22	45. 25	4. 26	·1081		{·03080			
7. 44	46. 30	5. 17	·1081	23. 37	{·03100			
8. 45	45. 0	5. 31	·1085		{·03040			
9. 15	46. 25	5. 44	·1084	23. 59	·03050			
9. 27	45. 50	6. 10	·1088					
10. 17	46. 35	6. 23	·1086					
10. 28	45. 55	6. 38	·1088					
10. 44	46. 45	6. 53	·1088					
11. 3	46. 0	7. 10	·1091					
11. 48	47. 25	7. 21	·1089					
13. 52	46. 0	7. 30	·1090					
14. 0	47. 0	8. 17	·1086					
14. 14	45. 35	8. 28	·1089					
16. 22	44. 40	8. 45	·1082					
16. 36	46. 25	9. 6	·1088					
16. 50	44. 25	9. 38	·1086					
17. 33	43. 15	10. 33	·1089					
17. 47	44. 30	10. 51	·1086					
17. 53	43. 40	11. 2	·1088					
18. 1	45. 10	11. 28	·1087					
18. 18	44. 0	11. 38	·1089					
19. 5	43. 0	12. 22	·1087					
20. 10	42. 25	13. 12	·1092					
20. 17	42. 55	13. 24	·1090					
20. 23	42. 10	16. 15	·1094					
20. 55	43. 50	16. 54	·1093					
22. 15	46. 55	17. 8	·1093					
22. 50	49. 10	17. 29	·1090					
22. 57	48. 55	18. 11	·1096					
23. 15	50. 0	20. 39	·1094					
23. 52	50. 0	20. 58	·1098					
23. 59	50. 35	22. 32	·1097					
		22. 51	·1104					
		23. 29	·1099					
		23. 59	·1102					
July 13		July 13		July 13		July 13		
0. 0	20. 50. 35	0. 0	·1102	0. 0	·03050	1. 0	70·0	70·0
0. 53	52. 45	0. 17	·1102	2. 46	{·02980	3. 0	71·5	71·5
1. 7	51. 50	0. 29	·1093		{·02860	6. 0	72·4	73·0
1. 47	53. 10	1. 0	·1093	7. 32:	·02580	Max.	75·5	76·5

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 13		July 13		July 13		July 13		
h m	° ′ ″	h m		h m		h m	°	°
2. 9	20. 52. 30	1. 44	·1094	10. 26	·02760	9. 0	70·9	72·0
2. 18	52. 55	2. 48	·1095	13. 5	·02945	18. 0	64·4	65·7
2. 45	51. 55	3. 14	·1086	14. 0	·03053	Min.	62·2	60·4
3. 58	50. 30	3. 52	·1094	16. 26	{·03043	21. 0	63·8	63·3
4. 10	51. 5	4. 1	·1093		{·03000			
4. 53	47. 30	4. 41	·1088	18. 9	{·03147			
5. 19	48. 30	5. 52	·1091		{·03050			
6. 12	46. 50	6. 9	·1096	19. 25	{·03194			
	***	6. 53	·1097		{·03100			
8. 0	47. 40	7. 5	·1098	20. 38	{·03243			
	***	7. 27	·1096		{·03160			
9. 11	47. 0	7. 40	·1096	21. 8	{·03200			
10. 8	46. 15	8. 1	·1101		{·02824			
11. 35	46. 20	10. 34	·1102	23. 19	{·02840			
11. 56	47. 30	10. 46	·1104		{·03170			
12. 3	47. 10	11. 12	·1102	23. 59	·03180			
12. 36	48. 5	11. 53	·1105					
13. 43	47. 5	13. 37	·1103					
13. 53	47. 50	14. 1	·1106					
14. 36	47. 10	14. 22	·1102					
15. 1	50. 0	15. 30	·1102					
15. 28	47. 5	16. 37	·1107					
16. 5	46. 55	18. 41	·1099					
16. 27	45. 0	20. 5	·1088					
16. 44	44. 40	21. 7	·1084					
17. 28	42. 35	22. 12	·1086					
18. 50	42. 30	22. 38	·1090					
19. 14	41. 10	23. 0	·1093					
19. 40	42. 15	23. 25	·1096					
20. 6	41. 25	23. 59	·1099					
20. 28	42. 10							
20. 57	39. 55							
23. 20	49. 20							
23. 59	51. 5							
July 14		July 14		July 14		July 14		
0. 0	20. 51. 5	0. 0	·1099	0. 0	·03180	1. 0	66·9	66·6
0. 9	51. 15	1. 25	·1101	1. 0	{·03153	3. 0	70·0	70·0
1. 6	51. 20	1. 53	·1094		{·03164	6. 0	73·1	73·3
1. 34	51. 50	2. 16	·1095	2. 19	·03060	Max.	74·7	75·0
2. 53	50. 25	2. 36	·1093	2. 58	{·02980	9. 0	74·0	74·0
3. 5	50. 45	2. 55	·1101		{·02940	18. 0	68·0	68·2
3. 18	49. 40	3. 19	·1097	6. 52	·02570	Min.	63·6	62·8
3. 42	49. 50	4. 8	·1115	9. 15	·02460	21. 0	65·6	66·6
3. 52	50. 40	4. 43	·1119	13. 45:	·02540	22. 30	66·0	66·5
5. 10	48. 50	5. 1	·1115	18. 15	·03120	23. 0	66·3	66·7
5. 44	49. 0	5. 12	·1118	21. 21	{·03325			
5. 58	48. 15	5. 26	·1115		{·03297			
6. 16	48. 45	5. 32	·1118	23. 59	·03320			
6. 42	48. 10	6. 23	·1117					
7. 10	43. 10	6. 53	·1112					
7. 43	47. 5	7. 8	·1120					
8. 17	47. 55	7. 19	·1117					
8. 32	47. 15	8. 38	·1108					
9. 19	48. 0	9. 12	·1112					
9. 30	47. 0	9. 34	·1110					
9. 44	47. 25	11. 2	·1112					
10. 35	46. 25	11. 33	·1115					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 14		July 14						
h m	° ′ ″	h m		h m		h m	°	°
11. 22	20. 47. 30	11. 59	·1112					
11. 46	45. 50	12. 40	·1118					
12. 0	48. 35	14. 51	·1110					
12. 18	49. 20	15. 7	·1113					
13. 6	48. 5	15. 31	·1111					
13. 30	44. 55	16. 23	·1111					
14. 24	42. 40	17. 15	·1118					
14. 33	41. 15	19. 6	·1114					
	***	19. 15	·1111					
15. 14	41. 30	19. 42	·1108					
	***	20. 45	·1110					
16. 2	40. 30	21. 8	·1107					
16. 21	44. 20	21. 43	·1108					
17. 2	45. 15	21. 49	·1108					
17. 40	42. 50	22. 29	·1110					
18. 13	42. 40	22. 41	·1107					
18. 28	44. 0	23. 20	·1106					
19. 23	43. 55	23. 30	·1110					
19. 47	41. 55	23. 44	·1105					
20. 33	44. 25	23. 55	·1109					
21. 40	46. 5	23. 59	·1106					
22. 56	49. 55							
23. 1	49. 25							
23. 53	50. 25							
23. 59	51. 10							
July 15		July 15		July 15		July 15		
0. 0	20. 51. 10	0. 0	·1106	0. 0	·03320	0. 0	67 ·5	68 ·0
0. 18	53. 5	0. 23	·1106	1. 46:	·03155	1. 0	69 ·0	69 ·1
0. 32	52. 35	0. 38	·1104	3. 5	·02793	2. 0	71 ·0	71 ·3
	***	1. 29	·1119		·02700	3. 0	72 ·9	73 ·4
1. 18	53. 45	1. 58	·1138	3. 52:	·02495	6. 0	77 ·0	77 ·2
1. 45	53. 15	2. 6	·1135	4. 40	·02420	Max.	79 ·8	79 ·0
2. 41	50. 40	2. 12	·1139	8. 19	·02120	9. 0	77 ·4	78 ·0
2. 47	51. 45		***	9. 46	·02090	12. 0	77 ·2	77 ·8
3. 0	50. 40	2. 52	·1152	9. 59	·02060	18. 10	70 ·5	71 ·4
3. 27	51. 30	3. 11	·1154	11. 3	·02023	Min.	67 ·0	68 ·0
3. 51	50. 5	3. 22	·1160	12. 5	·02040	21. 0	68 ·8	69 ·2
4. 17	50. 0	3. 32	·1158	12. 22	·02078	22. 0	68 ·9	69 ·0
4. 31	50. 55	4. 15	·1156	13. 3	·02060	23. 0	68 ·9	69 ·0
4. 57	49. 0	4. 28	·1160	13. 22	·02074			
5. 9	39. 40	5. 0	·1151	13. 35	·02055			
5. 29	48. 50	5. 42	·1145	14. 7	·02060			
6. 18	48. 30	6. 13	·1151	14. 41	·02158			
6. 49	47. 30	6. 44	·1151	15. 15:	·02180			
7. 0	48. 0	7. 0	·1157	15. 39	·02280			
8. 9	47. 30	7. 6	·1155	15. 57	·02284			
9. 2	43. 15	7. 15	·1158	16. 9	·02360			
9. 27	46. 0	7. 38	·1150	16. 24	·02390			
9. 40	50. 25	7. 45	·1150	17. 4	·02540			
10. 11	39. 10	7. 54	·1142	17. 18	·02555			
10. 37	47. 0	8. 21	·1138	17. 46:	·02620			
10. 47	45. 0	8. 31	·1135	18. 28	·02640			
11. 0	36. 55	9. 2	·1137	19. 33	·02770			
11. 30	36. 40	9. 15	·1160	23. 59	·02920			
11. 39	37. 25	9. 23	·1152					
11. 43	36. 55	9. 36	·1163					
11. 48	37. 45	9. 47	·1151					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 15		July 15						
h m	° ′ ″	h m		h m		h m	°	°
12. 0	20. 33. 25	9. 56	·1158					
12. 8	32. 50	10. 3	·1170					
12. 12	33. 50	10. 16	·1168					
12. 28	29. 10	10. 35	·1126					
12. 33	29. 55	10. 40	·1133					
12. 51	27. 30	10. 51	·1116					
12. 57	28. 5	10. 59	·1126					
13. 18	37. 40	11. 8	·1116					
13. 34	32. 25	11. 15	·1119					
13. 45	38. 0	11. 20	·1116					
14. 7	30. 5	11. 38	·1113					
14. 29	45. 35	11. 45	·1121					
14. 41	38. 5	12. 0	·1104					
14. 52	41. 35	12. 11	·1125					
15. 3	37. 0	12. 38	·1121					
15. 21	39. 15	13. 0	·1097					
15. 46	50. 25	13. 6	·1102					
16. 0	58. 30	13. 12	·1098					
16. 15	54. 5	13. 26	·1104					
16. 26	58. 50	13. 35	·1102					
16. 38	20. 54. 15	13. 47	·1113					
16. 49	21. 0. 10	14. 25	·1075					
16. 57	20. 56. 15	14. 47	·1096					
	***	14. 53	·1094					
17. 20	53. 0	14. 58	·1098					
17. 32	58. 5	15. 20	·1094					
17. 38	56. 10	15. 30	·1099					
17. 40	57. 5	15. 53	·1068					
17. 45	20. 55. 15	16. 9	·1085					
17. 57	21. 2. 15	16. 17	·1084					
18. 10	20. 59. 20	16. 32	·1096					
18. 38	48. 10	17. 0	·1090					
	***	17. 28	·1070					
19. 4	47. 45	17. 40	·1072					
19. 22	44. 5	17. 51	·1068					
19. 40	46. 55	18. 11	·1083					
19. 54	47. 0	18. 38	·1082					
20. 20	51. 5	18. 56	·1088					
20. 30	50. 20	19. 7	·1084					
20. 38	51. 35	19. 45	·1077					
20. 45	50. 5	19. 59	·1060					
21. 10	50. 45	20. 23	·1057					
21. 29	53. 0	20. 51	·1069					
22. 47	52. 0	21. 13	·1061					
23. 54	54. 35	21. 28	·1063					
23. 59	54. 30	21. 46	·1068					
		21. 54	·1066					
		23. 7	·1083					
		23. 38	·1077					
			(†)					
July 16		July 16		July 16		July 16		
0. 0	20. 54. 30		(†)	0. 0	·02920	0. 0	69 ·7	69 ·8
0. 19	56. 15	1. 0	·1088*	1. 46	·02960	1. 0	69 ·5	69 ·7
1. 1	52. 15	3. 0	·1117*	3. 46	·03060	2. 0	69 ·0	69 ·2
1. 30	53. 0	3. 28	·1106	4. 49	·03040	3. 0	69 ·9	69 ·7
1. 37	54. 30	3. 52	·1117	7. 41:	·02895	6. 0	70 ·3	71 ·0
1. 59	53. 10	4. 11	·1101	10. 4	·03010	Max.	70 ·8	71 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

July 16. The registers of both Declination and Horizontal Force were lost from 16h to 23h.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 16		July 16		July 16		July 16		
h m	° ′ ″	h m		h m		h m	°	°
2. 8	20. 53. 55	4. 23	·1106	13. 57	·03135	9. 0	69 ·0	69 ·7
2. 22	50. 40	4. 44	·1098	17. 55	{·03327	18. 0	60 ·9	62 ·5
2. 33	52. 10	5. 0	·1108		{·03230	Min.	57 ·8	57 ·4
2. 47	49. 50	5. 40	·1113	19. 7	{·03345	21. 0	59 ·8	60 ·2
3. 10	51. 0	5. 49	·1114		{·03280			
3. 37	50. 15	6. 31:	·1122	20. 15	{·03365			
3. 52	51. 25	6. 53	·1118		{·03300			
4. 3	50. 30		***	21. 32	{·03363			
4. 23	51. 50	7. 38	·1118		{·03300			
4. 43	49. 25	7. 42	·1121	22. 15	·03340			
5. 17	49. 30	7. 56	·1117	22. 55	{·03320			
6. 48	47. 50	8. 7	·1120		{·03270			
7. 32	47. 50	8. 34	·1116	23. 59	·03265			
8. 16	49. 50	8. 46	·1118					
9. 55	46. 45	9. 8	·1116					
10. 26	47. 10	9. 32	·1115					
10. 56	45. 40	9. 51	·1116					
11. 23	46. 10	10. 1	·1114					
12. 44	45. 0	10. 26	·1120					
13. 15	48. 30	10. 45	·1119					
13. 37	45. 55	11. 19	·1124					
13. 53	45. 35	11. 50	·1119					
14. 4	43. 45	12. 32	·1124					
14. 36	45. 10	13. 10	·1117					
15. 30	44. 40	13. 47	·1124					
15. 43	44. 5	13. 56	·1123					
15. 58	44. 35	14. 47	·1121					
	(†)	14. 54	·1124					
21. 0	52. 51*	15. 8	·1122					
23. 17	52. 35	15. 54	·1124					
23. 23	53. 0		(†)					
23. 27	52. 35	21. 0	·1107*					
23. 37	56. 40	23. 29	·1117					
23. 48	54. 35	23. 38	·1120					
23. 53	55. 10	23. 45	·1133					
23. 59	55. 0	23. 59	·1110					
July 17		July 17		July 17		July 17		
0. 0	20. 55. 0	0. 0	·1110	0. 0	·03265	1. 0	62 ·0	62 ·7
0. 10	54. 20	0. 17	·1112	2. 55:	·03023	3. 0	64 ·7	65 ·5
0. 38	54. 55	0. 43	·1117	4. 53	·02630	Max.	69 ·6	69 ·5
0. 50	54. 35	0. 54	·1116	7. 3	·02490	9. 0	68 ·8	69 ·5
1. 23	54. 0	1. 2	·1122	9. 55	·02410	18. 0	61 ·8	63 ·0
1. 30	55. 30	1. 23	·1122	14. 34:	·02660	Min.	58 ·8	58 ·2
1. 38	54. 35	1. 28	·1125	18. 37	·03270	21. 0	60 ·5	61 ·3
1. 45	55. 25	1. 33	·1119	21. 8	{·03380			
1. 56	55. 5	1. 43	·1130		{·03180			
2. 1	54. 0	1. 50	·1128	23. 59	·03300			
2. 24	54. 20	2. 6	·1126					
2. 31	52. 35	2. 20	·1107					
	***	2. 25	·1115					
2. 54	53. 35	2. 30	·1113					
3. 31	49. 20	2. 37	·1120					
3. 40	50. 55	2. 43	·1112					
3. 48	39. 40		***					
3. 53	51. 10	3. 7	·1124					
4. 20	45. 35	3. 38	·1107					
4. 38	46. 25	3. 49	·1118					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 17		July 17		h m		h m	°	°
h m	° ′ ″	h m						
4. 53	20. 45. 30	3. 54	·1120					
5. 25	45. 35	4. 0	·1134					
5. 32	46. 30	4. 25	·1109					
5. 38	45. 30	4. 47	·1114					
5. 44	46. 20	4. 57	·1110					
5. 51	44. 40	5. 10	·1120					
5. 58	45. 45	5. 21	·1118					
6. 30	45. 35	5. 32	·1124					
6. 38	46. 30	5. 38	·1137					
6. 54	46. 15	5. 45	·1126					
7. 15	44. 50	5. 51	·1127					
7. 55	47. 25	5. 57	·1119					
8. 1	46. 10	6. 9	·1114					
8. 33	46. 30	6. 24	·1119					
8. 43	44. 35	6. 38	·1138					
9. 20	46. 0	6. 44	·1131					
10. 23	45. 10	6. 59	·1134					
11. 8	47. 0	7. 6	·1110					
11. 39	43. 45	7. 22	·1134					
11. 58	43. 0	7. 29	·1127					
12. 13	39. 55	7. 43	·1130					
12. 29	41. 10	8. 3	·1114					
12. 40	38. 55	8. 21	·1129					
13. 18	45. 50	8. 37	·1110					
13. 34	44. 10	8. 46	·1119					
13. 45	46. 45	9. 21	·1112					
	***	9. 37	·1115					
14. 16	46. 40	9. 43	·1119					
15. 0	43. 55	9. 49	·1119					
15. 37	44. 25	9. 55	·1123					
15. 52	43. 15	10. 6	·1121					
16. 0	45. 0	10. 20	·1122					
16. 7	43. 20	10. 24	·1126					
	***	10. 35	·1125					
16. 48	40. 45	10. 47	·1134					
17. 29	40. 5	10. 53	·1132					
	***	11. 1	·1137					
18. 17	41. 35	11. 15	·1122					
18. 30	40. 5	11. 34	·1133					
18. 37	41. 40	11. 48	·1127					
18. 49	40. 35	11. 53	·1130					
19. 7	43. 10	12. 6	·1125					
19. 17	41. 35		***					
19. 35	41. 20	13. 30	·1127					
	***	14. 0	·1123					
20. 37	43. 5	14. 40	·1131					
20. 48	41. 20		***					
21. 23	43. 0	15. 1	·1128					
21. 31	44. 50		***					
21. 44	43. 0	16. 0	·1125					
22. 0	45. 25	16. 8	·1129					
22. 6	45. 15	16. 14	·1126					
22. 22	48. 0	16. 26	·1129					
22. 33	46. 40	17. 18	·1134					
23. 15	47. 40	18. 50	·1130					
23. 24	49. 10	19. 0	·1126					
23. 44	51. 5	19. 24	·1124					
23. 50	50. 5	19. 34	·1121					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 17		July 17						
h m	° ′ ″	h m		h m		h m	°	°
23. 59	20. 51. 0	19. 43	·1122					
		20. 1	·1117					
		20. 8	·1118					
		20. 21	·1115					
		20. 43	·1116					
		20. 56	·1111					
		21. 34	·1116					
		21. 51	·1106					
		22. 25	·1117					
		22. 36	·1111					
			(†)					
July 18		July 18		July 18		July 18		
0. 0	20. 51. 0		(†)	0. 0	·03300	1. 0	61 ·0	61 ·5
0. 12	51. 50	1. 0	·1094*	1. 2	·03327	3. 0	61 ·9	62 ·5
0. 19	51. 0	3. 0	·1135*		·03240	Max.	63 ·7	64 ·2
0. 38	53. 15	3. 24	·1137		***	9. 0	63 ·5	64 ·2
0. 58	52. 5	3. 42	·1127	3. 10	·03330	Min.	53 ·7	53 ·0
1. 10	55. 10	3. 53	·1134	6. 10	·03170	22. 30	56 ·1	56 ·5
1. 24	20. 54. 20	4. 6	·1126	7. 7	·03180			
1. 39	21. 0. 0	4. 14	·1131	7. 55	·03100			
1. 45	20. 59. 20	4. 23	·1126	10. 26	·03010			
1. 53	59. 50	4. 38	·1135	11. 38	·03035			
2. 1	55. 30	4. 43	·1133	15. 18	·03295			
2. 8	58. 25	4. 53	·1135		·03100			
2. 11	20. 57. 25	5. 4	·1130	17. 2	·03292			
2. 16	21. 5. 35	5. 22	·1134		·03237			
2. 30	20. 52. 20	5. 32	·1128	18. 13	·03312			
2. 35	20. 56. 55	5. 40	·1132		·03250			
2. 43	21. 3. 15	5. 53	·1122	19. 19	·03342			
2. 55	20. 59. 55	6. 11	·1142		·03310			
2. 57	21. 2. 20	6. 23	·1130	20. 20	·03400			
3. 9	20. 56. 35	6. 34	·1134		·03350			
3. 33	55. 0		(†)	20. 33	·03357			
3. 40	56. 55	7. 33	·1146	20. 50	·03395			
3. 50	56. 10	7. 50	·1128	21. 7	·03390			
3. 59	57. 40	7. 58	·1134	21. 15	·03385			
4. 34	53. 15	8. 2	·1125	21. 49	·03395			
4. 43	53. 25		(†)		·03360			
5. 27	51. 55	8. 41	·1129	22. 27	·03320			
5. 38	52. 25	9. 46	·1126	23. 5	·03340			
5. 58	50. 10	9. 59	·1130	23. 34	·03295			
6. 7	51. 25	10. 40	·1127	23. 59	·03293			
6. 29	50. 0	10. 51	·1130					
6. 45	43. 20	11. 19	·1121					
6. 53	42. 25	11. 34	·1128					
7. 7	34. 0	11. 40	·1121					
7. 18	37. 35	11. 52	·1123					
7. 34	43. 35	12. 10	·1116					
7. 41	41. 40	12. 26	·1128					
7. 54	44. 30	12. 33	·1124					
8. 11	42. 20	12. 51	·1121					
8. 27	44. 30	13. 0	·1126					
8. 31	47. 15	13. 15	·1122					
8. 42	47. 45	13. 22	·1127					
9. 0	49. 35	13. 28	·1125					
9. 39	45. 55	13. 51	·1127					
9. 48	47. 10	13. 53	·1127					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 18		July 18						
h m	° ′ ″	h m		h m		h m	°	°
10. 1	20. 47. 0	14. 6	·1124					
10. 18	43. 45	14. 28	·1123					
10. 39	42. 25		(†)					
10. 49	44. 30	22. 30	·1082*					
11. 7	43. 50	23. 8	·1097					
11. 17	45. 25	23. 18	·1113					
11. 55	43. 45	23. 29	·1099					
	***	23. 41	·1102					
12. 18	47. 5	23. 59	·1111					
13. 3	47. 25							
13. 13	38. 40							
	***							
13. 41	47. 0							
13. 54	47. 30							
14. 11	45. 20							
14. 19	47. 25							
14. 29	48. 30							
	(†)							
22. 14	46. 30							
	***							
22. 41	49. 55							
23. 0	50. 0							
23. 13	48. 15							
23. 15	49. 55							
23. 24	48. 40							
23. 53	49. 50							
23. 59	49. 10							
July 19		July 19		July 19		July 19		
0. 0	20. 49. 10	0. 0	·1111	0. 0	·03293	0. 0	58 ·0	58 ·0
0. 8	50. 25	0. 8	·1109	1. 54	·03164	Max.	68 ·8	68 ·7
	***	0. 9	·1121	4. 30	·02870	9. 18	68 ·0	68 ·3
0. 46	52. 55	0. 14	·1114	11. 11	·02503	18. 0	62 ·5	63 ·1
1. 2	52. 10	0. 44	·1104	12. 27	·02570	Min.	60 ·0	59 ·5
1. 20	53. 0	0. 53	·1107	13. 22	·02558	21. 0	61 ·5	61 ·9
2. 0	51. 35	1. 7	·1106	14. 23	·02660			
2. 51	50. 35	1. 32	·1115	15. 12	·02660			
3. 13	51. 20	1. 44	·1114	17. 7	·02827			
4. 28	49. 10	1. 53	·1118	19. 59	·03192			
4. 37	49. 40	2. 8	·1117	21. 8	·03232			
4. 52	48. 15	2. 14	·1127		·03195			
5. 2	48. 30	2. 18	·1119	21. 50	·03210			
5. 30	47. 55	2. 23	·1121	23. 59	·03260			
5. 43	49. 55	2. 36	·1117					
5. 54	46. 15	2. 38	·1124					
6. 8	45. 0		***					
6. 22	46. 10	3. 2	·1113					
7. 7	40. 45	3. 13	·1116					
7. 37	46. 0	3. 21	·1108					
7. 49	46. 30	3. 23	·1113					
8. 0	42. 15		***					
8. 27	43. 40	3. 39	·1114					
8. 53	46. 40	3. 46	·1113					
9. 5	46. 5	4. 7	·1114					
	***	4. 15	·1118					
9. 39	47. 0	4. 31	·1111					
9. 49	44. 15	4. 43	·1126					
9. 54	44. 30	4. 58	·1109					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

July 18. The photographic trace of the Declination Magnet wae lost from $14^h.\ 29^m.$ to $22^h.\ 14^m.$, and that of the Horizontal Force Magnet from $14^h.\ 29^m.$ to $23^h.\ 0^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
July 19		July 19						
h m	° ′ ″	h m		h m		h m	°	°
10. 3	20. 40. 25	5. 7	·1117					
10. 22	45. 30	5. 15	·1118					
10. 28	47. 40	5. 24	·1111					
10. 33	47. 10	5. 38	·1117					
10. 39	48. 35	5. 49	·1135					
10. 58	45. 30	6. 12	·1107					
11. 10	45. 55	6. 23	·1120					
11. 22	44. 0	6. 51	·1108					
11. 33	41. 20	7. 4	·1114					
11. 53	40. 25	7. 16	·1125					
12. 23	44. 20	7. 38	·1129					
12. 35	48. 5	8. 0	·1119					
12. 57	46. 30	8. 14	·1119					
13. 13	49. 5	8. 19	·1116					
13. 30	47. 15	8. 50	·1121					
13. 51	46. 40	9. 1	·1118					
14. 2	48. 30	9. 19	·1126					
14. 12	48. 20	9. 53	·1127					
14. 39	51. 15	10. 6	·1139					
14. 48	51. 15	10. 10	·1135					
15. 0	55. 0	10. 15	·1137					
15. 12	54. 45	10. 23	·1131					
15. 32	51. 30	10. 34	·1132					
	***	10. 39	·1139					
16. 10	49. 30	10. 44	·1129					
	***	10. 58	·1124					
16. 43	50. 55	11. 11	·1124					
16. 56	48. 30	11. 41	·1105					
17. 10	47. 35	11. 57	·1104					
17. 19	44. 30	12. 7	·1108					
	***	12. 35	·1110					
18. 10	39. 25	12. 41	·1112					
18. 29	50. 0	12. 52	·1108					
18. 33	49. 15	13. 16	·1116					
18. 38	50. 55	13. 29	·1108					
18. 53	52. 30	13. 37	·1112					
19. 12	51. 40	13. 54	·1109					
19. 22	49. 0	14. 27	·1112					
19. 38	49. 20	14. 36	·1115					
19. 45	47. 5	14. 46	·1110					
20. 15	47. 10	14. 59	·1107					
20. 23	45. 45	15. 32	·1106					
20. 32	46. 50	15. 51	·1118					
20. 56	44. 5	16. 23	·1121					
21. 9	47. 30	16. 33	·1115					
21. 23	47. 15	16. 53	·1116					
21. 40	48. 55	17. 9	·1123					
21. 53	46. 15	17. 27	·1117					
22. 10	51. 35		***					
22. 22	50. 5	18. 29	·1110					
	***	19. 19	·1086					
22. 53	52. 0	19. 38	·1097					
23. 21	51. 0	20. 8	·1104					
23. 54	53. 5	20. 35	·1105					
23. 59	53. 0	20. 46	·1100					
			***					
		21. 10	·1101					
		21. 19	·1093					
July 20		July 20		July 20		July 20		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 53. 0	0. 0	·1093	0. 0	·03260	1. 0	63·3	63·3
0. 8	53. 30	0. 9	·1092	0. 55	·03290	3. 0	64·9	64·8
0. 23	51. 5		(†)	4. 27	·03000	Max.	68·4	69·0
0. 29	52. 10	1. 0	·1097*	7. 16	·02640	9. 0	68·2	69·0
0. 39	52. 15	1. 23	·1110	9. 55	·02550	18. 0	61·2	61·9
0. 44	51. 20	1. 29	·1108	12. 18	·02630	Min.	58·6	58·3
0. 54	53. 25	1. 40	·1112	15. 40	·02980	21. 0	60·0	60·5
1. 5	51. 20	1. 52	·1106	17. 27	·03240			
1. 41	52. 30	1. 59	·1111	18. 26	{·03297			
1. 53	51. 35	2. 14	·1112		{·03260			
2. 29	52. 5	2. 23	·1116	20. 22	·03360			
2. 39	51. 25	2. 41	·1118	23. 59	·03360			
2. 50	52. 10	2. 53	·1127					
3. 6	49. 35	3. 6	·1120					
3. 20	50. 50	3. 23	·1121					
3. 26	50. 25	3. 36	·1118					
3. 54	51. 25	3. 42	·1106					
4. 2	49. 30	3. 53	·1120					
4. 18	49. 0	4. 4	·1112					
4. 25	45. 5	4. 16	·1128					
4. 32	44. 35	4. 23	·1108					
4. 43	45. 30	4. 47	·1125					
4. 51	47. 5	4. 59	·1111					
5. 0	45. 40	5. 16	·1134					
5. 8	46. 50	5. 31	·1126					
5. 48	46. 20	5. 41	·1125					
5. 54	45. 30	5. 52	·1118					
6. 8	47. 5	6. 0	·1128					
6. 15	46. 5	6. 13	·1120					
6. 53	47. 0	6. 30	·1118					
7. 13	46. 20	6. 37	·1121					
7. 26	47. 30	6. 55	·1118					
7. 38	47. 25	7. 2	·1123					
8. 0	46. 5	7. 17	·1123					
8. 22	46. 30	7. 31	·1118					
8. 50	45. 20	8. 0	·1123					
9. 23	46. 50	8. 22	·1118					
9. 42	49. 5	8. 31	·1118					
10. 0	45. 45	8. 46	·1121					
10. 8	44. 50	8. 53	·1126					
10. 28	42. 35	9. 18	·1119					
10. 55	46. 0	9. 27	·1125					
11. 3	44. 35		***					
11. 13	46. 0	10. 8	·1127					
11. 24	44. 35	10. 25	·1120					
11. 37	45. 5	10. 38	·1126					
12. 8	50. 40	10. 45	·1123					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
July 20		July 20						
h m	° ′ ″	h m		h m		h m	°	°
12. 30	20. 46. 50	10. 53	·1124					
12. 38	48. 10	11. 1	·1120					
13. 15	46. 0	11. 11	·1126					
	***	11. 25	·1122					
14. 47	45. 35	12. 10	·1128					
14. 58	47. 5	12. 23	·1123					
15. 14	45. 30	12. 44	·1127					
15. 23	46. 50	13. 1	·1120					
15. 46	45. 25	14. 15	·1120					
16. 10	46. 10	14. 36	·1124					
16. 32	44. 30	15. 4	·1127					
17. 3	45. 10	15. 15	·1124					
17. 53	43. 5	15. 36	·1127					
18. 6	44. 5	16. 0	·1124					
18. 15	42. 55	16. 22	·1122					
18. 45	43. 50		***					
18. 52	45. 0	17. 45	·1124					
19. 3	42. 30	18. 15	·1120					
	***	18. 25	·1122					
19. 31	47. 0	18. 46	·1116					
19. 46	45. 50	18. 54	·1119					
20. 12	46. 40	19. 14	·1109					
20. 26	46. 20	19. 38	·1107					
20. 30	44. 10	20. 2	·1093					
20. 47	47. 0	20. 22	·1097					
20. 53	46. 30	21. 5	·1088					
20. 58	48. 30	21. 23	·1090					
21. 16	48. 25	21. 39	·1094					
21. 26	49. 35	21. 57	·1102					
21. 50	49. 55	22. 0	·1094					
22. 2	48. 55	22. 36	·1098					
22. 23	49. 55	22. 56	·1082					
22. 43	50. 5	23. 2	·1082					
22. 52	51. 10	23. 21	·1081					
23. 59	52. 25	23. 30	·1082					
		23. 43	·1081					
		23. 52	·1083					
		23. 59	·1083					
July 21		July 21		July 21		July 21		
0. 0	20. 52. 25	0. 0	·1083	0. 0	·03360	1. 0	61·9	62·0
0. 7	51. 40	0. 28	·1085	1. 8	·03330	3. 0	62·6	62·8
0. 43	52. 35	1. 9	·1095		·03150	6. 0	64·0	64·4
0. 55	52. 0	1. 23	·1092	5. 30	·03053	Max.	64·7	65·2
1. 23	52. 0	1. 38	·1103	11. 52	·02827	9. 0	64·7	65·2
1. 31	52. 30	1. 47	·1094	17. 14	·02900	18. 0	64·0	64·5
1. 45	51. 10	1. 55	·1103		·02760	Min.	62·4	62·2
1. 54	51. 55	2. 6	·1095	18. 29	·02817	21. 0	64·0	64·0
2. 8	50. 40	2. 23	·1103		·02880	22. 0	65·0	65·1
2. 14	52. 5	2. 48	·1092	19. 57	·02900	23. 0	65·2	65·7
2. 23	51. 10	3. 8	·1096		·02810			
2. 37	51. 55	3. 26	·1088	23. 59	·02783			
3. 6	51. 0		***					
3. 21	51. 30	4. 8	·1092					
3. 43	49. 50	4. 19	·1089					
3. 54	50. 35	4. 53	·1094					
4. 7	48. 25	5. 13	·1108					
4. 16	47. 45	5. 23	·1106					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Off H. F. Magnet.	Readings of Thermometers. Off V. F. Magnet.
July 21		July 21						
h m	° ′ ″	h m		h m		h m	°	°
4. 22	20. 48. 40	5. 30	·1112					
5. 8	47. 50	5. 38	·1110					
5. 23	48. 5	6. 15	·1108					
5. 28	49. 25	6. 38	·1115					
5. 37	48. 35	6. 48	·1107					
5. 44	49. 10	7. 6	·1125					
6. 7	49. 0	7. 20	·1116					
6. 15	48. 0	7. 33	·1114					
6. 46	47. 40	7. 46	·1115					
7. 11	45. 0	8. 24	·1101					
7. 22	47. 0	8. 32	·1103					
7. 38	46. 30	9. 11	·1099					
7. 46	44. 35	9. 17	·1100					
8. 1	45. 30	9. 32	·1097					
8. 16	43. 25	9. 49	·1100					
8. 30	44. 20	10. 0	·1096					
8. 38	42. 45	10. 36	·1107					
8. 57	44. 25	11. 7	·1097					
9. 8	43. 40	11. 28	·1104					
9. 17	44. 55	11. 51	·1096					
9. 43	45. 0	12. 5	·1095					
10. 5	47. 25	12. 23	·1091					
10. 16	46. 30	12. 47	·1094					
10. 22	46. 55	13. 2	·1091					
10. 38	45. 5	13. 17	·1094					
10. 46	46. 30	14. 8	·1090					
11. 4	44. 35	14. 43	·1090					
11. 21	46. 15	14. 53	·1093					
11. 42	46. 30	15. 13	·1085					
12. 0	45. 25	15. 36	·1083					
12. 7	47. 5	16. 16	·1090					
12. 43	45. 15	16. 47	·1097					
12. 53	46. 5	17. 26	·1091					
13. 9	45. 10	17. 38	·1091					
13. 23	45. 30	18. 10	·1094					
13. 53	44. 25	18. 50	·1076					
14. 19	44. 40	19. 0	·1068					
14. 58	46. 55	19. 15	·1071					
15. 16	45. 0	19. 36	·1066					
15. 52	50. 35	19. 52	·1076					
16. 1	49. 45	20. 3	·1079					
16. 7	51. 30	20. 22	·1076					
16. 22	49. 25	20. 34	·1084					
16. 29	49. 50	21. 9	·1080					
16. 52	46. 30	21. 19	·1074					
17. 1	46. 25	21. 28	·1075					
17. 13	44. 25	21. 45	·1069					
17. 22	45. 30		(†)					
17. 31	44. 20							
17. 45	43. 40							
18. 25	45. 10							
18. 38	47. 15							
19. 0	48. 45							
19. 7	48. 10							
19. 22	50. 35							
19. 38	49. 30							
19. 54	50. 45							
20. 10	48. 35							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 21								
h m	° ′ ″	h m		h m		h m	°	°
20. 14	20. 49. 5							
20. 26	45. 30							
20. 42	47. 25							
20. 54	44. 45							
21. 6	46. 5							
21. 23	46. 10							
21. 37	48. 25							
21. 53	47. 30							
22. 21	51. 25							
22. 40	50. 0							
22. 51	51. 10							
23. 2	49. 50							
23. 19	51. 0							
23. 54	50. 50							
23. 59	51. 25							
July 22		July 22		July 22		July 22		
0. 0	20. 51. 25		(†)	0. 0	·02783	0. 0	65 ·8	65 ·7
0. 25	52. 0	1. 0	·1089*	2. 0	·02697	1. 0	66 ·2	66 ·4
0. 41	51. 25	3. 0	·1101		·02756	2. 0	66 ·8	67 ·2
0. 48	52. 50	3. 8	·1105	5. 15	·02680	3. 0	66 ·9	67 ·3
0. 59	51. 30	3. 20	·1100	6. 45	·02730	6. 0	66 ·0	66 ·8
1. 22	52. 0	3. 32	·1110	9. 19:	·02750	Max.	67 ·8	67 ·0
1. 41	53. 30	3. 38	·1103	11. 25	·02880	9. 0	65 ·5	66 ·0
2. 15	50. 30	3. 42	·1110	14. 23	·02966	12. 0	64 ·6	65 ·0
2. 39	51. 0	3. 52	·1101		·02800	18. 0	61 ·1	61 ·8
3. 14	48. 0	3. 59	·1110	17. 6	·03030	Min.	58 ·5	58 ·2
3. 30	49. 5	4. 11	·1094		·02927	21. 0	60 ·3	60 ·6
3. 40	47. 5	4. 21	·1096	19. 27	·03150	22. 0	61 ·0	61 ·0
3. 47	48. 0	5. 11	·1089		·03063	23. 0	61 ·8	61 ·8
3. 56	46. 35	5. 37	·1112	21. 20	·03180			
4. 2	48. 25	5. 49	·1101		·03120			
4. 15	46. 40	5. 55	·1102	22. 10	·03150			
4. 49	48. 0	6. 8	·1091	23. 37	·03080			
5. 19	44. 15	6. 14	·1099		(†)			
5. 30	45. 30	6. 18	·1090					
5. 47	45. 5	6. 44	·1111					
6. 7	46. 10	7. 10	·1103					
6. 29	42. 20	7. 21	·1106					
6. 55	45. 45	7. 31	·1102					
7. 16	45. 20	7. 50	·1104					
7. 37	47. 25	8. 17	·1100					
8. 11	48. 40	8. 24	·1109					
8. 24	47. 20	8. 36	·1106					
8. 44	46. 35	9. 24	·1110					
9. 4	47. 55	9. 44	·1104					
9. 22	45. 0	10. 22	·1105					
9. 36	45. 50	10. 33	·1103					
9. 53	44. 50	10. 38	·1107					
10. 41	46. 0	10. 52	·1105					
11. 12	45. 10		(†)					
11. 28	47. 10	18. 15	·1106					
11. 52	46. 15	18. 23	·1105					
12. 1	47. 0	18. 31	·1107					
12. 14	46. 30	19. 1	·1102					
12. 36	46. 5	19. 13	·1103					
12. 52	44. 35	19. 54	·1095					
13. 18	47. 50	20. 0	·1096					
July 22								
h m	° ′ ″	h m		h m		h m	°	°
13. 28	20. 46. 45							
13. 38	47. 40							
13. 54	45. 50							
14. 10	46. 0							
14. 17	43. 45							
14. 42	45. 0							
15. 3	44. 35							
15. 23	45. 55							
15. 42	44. 5							
15. 46	45. 30							
15. 58	44. 25							
16. 26	48. 15							
16. 36	48. 0							
16. 53	49. 40							
16. 59	48. 55							
17. 13	49. 50							
17. 38	53. 0							
17. 50	51. 5							
18. 30	46. 35							
18. 37	47. 25							
18. 43	46. 35							
18. 48	45. 0							
18. 54	46. 35							
19. 1	45. 5							
19. 15	46. 5							
19. 20	44. 25							
19. 29	43. 20							
19. 31	45. 5							
19. 33	45. 0							
19. 40	44. 50							
19. 52	43. 5							
20. 0	44. 0							
20. 8	43. 0							
20. 23	42. 40							
20. 33	44. 25							
20. 47	43. 50							
21. 0	45. 25							
	***							
21. 53	47. 5							
22. 22	46. 30							
22. 43	47. 30							
23. 8	49. 30							
23. 18	49. 5							
23. 30	50. 35							
23. 56	50. 30							
23. 59	50. 40							
July 23		July 23		July 23		July 23		
0. 0	20. 50. 40		(†)		(†)	0. 0	62 ·9	62 ·3
0. 45	51. 25	0. 30	·1084	0. 18	·03045	1. 0	63 ·9	63 ·7
1. 30	53. 40	0. 42	·1095	2. 31	·02810	2. 0	64 ·9	64 ·9
1. 44	55. 45	0. 52	·1093		***	3. 0	65 ·7	65 ·5
2. 14	54. 55	1. 16	·1098	3. 45	·02760	Max.	69 ·8	69 ·0
2. 23	55. 20	1. 37	·1090	6. 25	·02580	9. 0	68 ·9	68 ·9
2. 29	53. 45	1. 45	·1107	7. 57	·02543	18. 0	61 ·5	62 ·3
2. 37	54. 0	2. 8	·1101	9. 45	·02467	Min.	57 ·8	57 ·2
2. 48	52. 30	2. 51	·1107	14. 7:	·02640	21. 0	59 ·6	60 ·0
2. 57	53. 30	3. 5	·1101	18. 23	·03240			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 23		July 23		July 23				
h m	° ′ ″	h m		h m		h m	°	°
3. 8	20. 49. 25	3. 17	·1114	21. 49	·03435			
3. 11	51. 0	3. 30	·1090	23. 59	·03430			
3. 22	49. 30	3. 40	·1112					
3. 26	49. 55	3. 51	·1115					
3. 35	47. 40	4. 24	·1096					
3. 51	50. 35	4. 52	·1097					
4. 1	49. 50	5. 8	·1110					
4. 38	51. 20	5. 32	·1106					
4. 56	50. 15		***					
5. 5	50. 30	6. 25	·1109					
5. 28	48. 45	6. 40	·1115					
6. 43	47. 15	6. 55	·1110					
6. 57	45. 45	7. 4	·1115					
7. 6	46. 30	7. 15	·1105					
7. 27	39. 0	7. 30	·1107					
7. 38	35. 10	7. 37	·1104					
8. 1	41. 0	7. 47	·1120					
8. 13	40. 45	8. 23	·1104					
8. 26	41. 35	8. 43	·1106					
8. 43	44. 25	8. 54	·1090					
9. 18	45. 10	9. 17	·1099					
9. 28	46. 10	9. 28	·1103					
9. 38	44. 25	9. 38	·1101					
10. 9	44. 5	9. 53	·1102					
10. 32	47. 35	10. 10	·1101					
10. 45	45. 35	10. 27	·1106					
10. 59	45. 30	10. 38	·1100					
11. 5	47. 0	10. 51	·1099					
11. 26	47. 20	11. 5	·1105					
11. 37	45. 10	11. 38	·1099					
12. 3	43. 35	11. 49	·1100					
12. 26	47. 30	12. 9	·1094					
12. 52	46. 35	12. 24	·1102					
13. 23	50. 40	12. 44	·1099					
13. 51	47. 0	13. 1	·1099					
14. 15	47. 40	13. 9	·1103					
14. 37	46. 0	13. 28	·1103					
15. 7	48. 0	13. 47	·1101					
15. 58	45. 5	14. 44	·1101					
16. 22	47. 30	14. 59	·1103					
16. 43	47. 35	15. 19	·1098					
17. 0	45. 20	15. 30	·1099					
17. 17	45. 25	15. 53	·1097					
17. 30	47. 5	16. 20	·1102					
	***	16. 31	·1100					
18. 52	43. 50	16. 51	·1104					
19. 8	44. 55	17. 45	·1094					
	***	18. 4	·1097					
19. 40	43. 55	18. 13	·1097					
19. 48	45. 10	19. 23	·1090					
19. 57	43. 5	20. 32	·1089					
20. 9	44. 15	21. 9	·1084					
20. 16	43. 35	22. 0	·1081					
20. 43	44. 25	22. 18	·1089					
20. 53	44. 0	22. 32	·1079					
21. 12	45. 0	22. 53	·1086					
21. 21	44. 15	23. 7	·1084					
21. 39	45. 30	23. 34	·1090					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 23		July 23						
h m	° ′ ″	h m		h m		h m	°	°
21. 45	20. 44. 15	23. 50	·1091					
21. 51	46. 50	23. 59	·1094					
21. 58	46. 15							
22. 21	47. 30							
22. 24	46. 45							
22. 43	49. 10							
23. 3	48. 15							
23. 59	51. 15							
July 24		July 24		July 24		July 24		
0. 0	20. 51. 15	0. 0	·1094	0. 0	·03430	1. 0	62 ·1	62 ·0
0. 39	53. 30	0. 23	·1097	1. 19	·03370	3. 0	63 ·7	63 ·7
0. 48	52. 10	0. 33	·1101	5. 39	·02945	Max.	67 ·3	67 ·3
1. 16	53. 30	0. 38	·1092	8. 5	·02620	9. 0	67 ·0	67 ·3
1. 38	52. 25	1. 23	·1099	10. 34	·02547	18. 0	62 ·0	62 ·0
1. 59	52. 35	1. 30	·1098	11. 45	·02480	Min.	60 ·4	60 ·2
2. 30	51. 0		***	12. 8	·02520	21. 0	61 ·8	62 ·0
2. 52	50. 40	2. 32	·1112	12. 54	·02510			
3. 1	51. 25	2. 45	·1108	13. 15	·02545			
3. 14	50. 15	3. 6	·1113	13. 30	·02550			
3. 21	50. 55	3. 17	·1111	14. 34:	·02660			
3. 30	49. 20	3. 22	·1114	15. 48	·02700			
3. 38	50. 15	3. 36	·1107	17. 21	·02907			
3. 54	49. 20	3. 48	·1111	20. 32	·03185			
4. 7	47. 55	4. 7	·1097	22. 11:	·03260			
4. 16	49. 0	4. 20	·1118	23. 0	·03230			
4. 32	46. 35	4. 34	·1099	23. 59	·03203			
4. 42	47. 20	4. 44	·1098					
4. 51	46. 30	4. 50	·1092					
5. 0	46. 30	5. 28	·1123					
5. 12	44. 0	5. 39	·1113					
5. 21	44. 30	5. 45	·1113					
5. 30	46. 45	5. 55	·1107					
5. 57	45. 5	6. 2	·1116					
6. 7	45. 40	6. 22	·1107					
6. 39	46. 30	6. 45	·1110					
6. 45	46. 0	7. 15	·1107					
7. 8	46. 40	7. 26	·1112					
7. 44	46. 30	7. 41	·1111					
8. 0	47. 30	7. 55	·1114					
8. 16	46. 30	8. 4	·1111					
9. 8	47. 0	8. 21	·1114					
9. 23	46. 20	8. 29	·1114					
9. 52	46. 45	8. 42	·1122					
9. 59	47. 25	9. 21	·1111					
10. 12	46. 25	9. 44	·1111					
10. 26	47. 35	9. 59	·1119					
10. 33	48. 40	10. 8	·1119					
10. 44	45. 25	10. 22:	·1129					
10. 53	44. 25	10. 41	·1124					
11. 18	52. 20	10. 55	·1129					
11. 57	33. 5	11. 26	·1097					
12. 23	39. 30	11. 32	·1101					
12. 30	39. 15	11. 43	·1096					
13. 6	47. 25	12. 7	·1121					
13. 17	52. 10	12. 56	·1074					
13. 37	47. 15	13. 19	·1097					
13. 48	46. 0	13. 54	·1105					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
July 24	
h m	° ′ ″
13. 57	20. 46. 25
14. 2	45. 15
14. 11	47. 5
14. 53	46. 30
15. 11	49. 35
15. 30	57. 0
15. 47	47. 5
16. 1	43. 20
16. 22	42. 15
16. 32	43. 40
16. 41	42. 15
17. 10	41. 30
17. 38	44. 0
17. 47	46. 35
17. 59	48. 5
18. 5	47. 35
18. 10	48. 0
18. 22	46. 25
18. 32	47. 45
18. 39	47. 0
18. 51	49. 0
19. 12	48. 10
19. 38	48. 45
19. 57	45. 30
20. 10	45. 25
20. 16	43. 40
20. 23	45. 5
20. 41	43. 30
20. 52	46. 20
21. 6	46. 30
21. 24	48. 10
21. 37	46. 0
21. 52	49. 5
22. 2	47. 35
22. 40	49. 30
22. 56	49. 25
23. 1	48. 20
23. 9	49. 0
23. 16	47. 30
23. 59	51. 40
July 25	
0. 0	20. 51. 40
0. 17	52. 15
0. 28	51. 5
1. 58	53. 20
2. 32	48. 5
2. 37	48. 50
2. 47	47. 55
3. 37	49. 35
4. 9	48. 35
4. 32	48. 30
4. 53	47. 15
5. 12	48. 30
5. 21	47. 20
5. 38	47. 50
6. 7	47. 15
6. 40	47. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 24	
h m	
14. 4	·1103
14. 46	·1118
15. 14	·1108
15. 28	·1086
15. 55	·1110
16. 23	·1107
16. 30	·1111
16. 45	·1103
17. 17	·1102
17. 31	·1106
18. 15	·1077
18. 38	·1072
19. 6	·1088
19. 15	·1089
19. 37	·1097
20. 11	·1088
20. 21	·1090
20. 39	·1085
21. 4	·1091
21. 34	·1074
21. 48	·1083
22. 0	·1077
22. 18	·1075
22. 36	·1078
22. 48	·1074
22. 55	·1077
23. 1	·1061
23. 9	·1080
23. 17	·1070
23. 23	·1077
23. 25	·1074
23. 41	·1088
23. 59	·1084
July 25	
0. 0	·1084
0. 11	·1081
0. 51	·1089
1. 2	·1087
1. 23	·1094
1. 54	·1090
	(†)
3. 11	·1112
4. 10	·1099
4. 19	·1094
4. 29	·1097
4. 46	·1098
4. 54	·1096
5. 14	·1110
5. 27	·1105
5. 43	·1111

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 25	
0. 0	·03203
1. 0	·03125
	·03057
3. 4	·02915
9. 37:	·02707
18. 28	·03320
	·03100
20. 15	·03295
	·03240
21. 41	·03325
21. 50	·03295
23. 59	·03300

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 25		
1. 0	65 ·2	65 ·0
3. 0	66 ·3	66 ·0
Max.	66 ·6	66 ·0
9. 0	65 ·8	66 ·0
Min.	58 ·0	57 ·2
22. 5	59 ·8	60 ·8

Greenwich Mean Solar Time.	Western Declination.
July 25	
h m	° ′ ″
6. 53	20. 46. 20
7. 19	45. 45
7. 37	41. 40
7. 50	44. 10
8. 22	46. 30
8. 37	45. 0
9. 30	45. 5
10. 13	47. 40
10. 27	47. 30
10. 38	49. 0
11. 30	46. 35
11. 50	48. 5
12. 7	47. 40
12. 33	48. 15
12. 53	45. 40
13. 13	44. 30
13. 32	47. 30
15. 23	44. 45
15. 52	45. 0
16. 15	43. 10
16. 53	44. 35
17. 14	44. 10
17. 26	45. 50
17. 42	44. 15
18. 11	45. 20
19. 30	44. 25
20. 14	42. 30
21. 9	43. 35
21. 53	47. 5
22. 6	46. 30
23. 28	47. 40
23. 59	49. 0
July 26	
0. 0	20. 49. 0
0. 44	50. 50
1. 23	51. 0
1. 53	51. 25
3. 8	49. 25
3. 28	48. 20
3. 59	48. 5
4. 43	46. 25
4. 50	46. 30
5. 32	45. 25
7. 0	46. 20
7. 45	46. 5
8. 43	46. 10
8. 53	46. 30
9. 39	46. 0
10. 12	46. 50
	***
11. 27	46. 5
	***
13. 48	47. 5
14. 5	45. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 25	
h m	
6. 10	·1108
6. 18	·1110
6. 29	·1106
6. 41	·1112
6. 53	·1108
7. 13	·1113
7. 32	·1110
7. 47	·1125
8. 0	·1119
8. 12	·1118
8. 53	·1109
9. 32	·1110
9. 51	·1113
	***
11. 11	·1112
11. 27	·1108
12. 15	·1106
12. 28	·1111
12. 38	·1109
12. 53	·1109
13. 15	·1103
13. 45	·1105
13. 54	·1103
15. 49	·1104
16. 8	·1106
17. 23	·1099
17. 35	·1102
18. 58	·1100
19. 31	·1105
21. 24	·1102
21. 35	·1095
22. 30	·1094
22. 47	·1096
23. 0	·1094
	(†)
July 26	
	(†)
0. 38	·1096
1. 21	·1097
1. 56	·1101
2. 29	·1101
2. 53	·1104
	***
3. 30	·1102
3. 39	·1104
4. 8	·1105
5. 2	·1099
6. 53	·1104
7. 6	·1108
7. 20	·1106
8. 8	·1105
8. 15	·1103
8. 24	·1105
9. 47	·1102
10. 8	·1098
10. 21	·1098
10. 36	·1101

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 26	
0. 0	·03300
3. 33:	·03065
6. 10	·02640
11. 15:	·02440
15. 49	·02800
19. 26:	·03343
21. 40	·03410
23. 59	·03330

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 26		
Max.	69 ·7	69 ·7
9. 45	68 ·4	69 ·0
18. 0	61 ·3	61 ·7
Min.	58 ·0	57 ·6
21. 0	59 ·8	60 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 26		July 26						
h m	° ′ ″	h m		h m		h m	°	°
14. 26	20. 47. 5	11. 1	·1103					
14. 49	45. 45	12. 37	·1102					
	***	12. 47	·1104					
15. 31	47. 5	13. 0	·1103					
15. 52	44. 40	13. 16	·1106					
16. 14	45. 55	13. 30	·1104					
16. 57	44. 15	15. 20	·1103					
	***	15. 37	·1106					
17. 37	44. 50	16. 9	·1103					
18. 22	44. 15	17. 19	·1106					
18. 32	45. 0	17. 38	·1106					
19. 28	44. 10	17. 57	·1108					
20. 2	44. 30	19. 13	·1107					
20. 15	43. 40	20. 32	·1100					
22. 11	48. 0	21. 38	·1096					
22. 37	47. 40	22. 14	·1096					
23. 27	51. 20	22. 21	·1098					
23. 59	52. 50	22. 30	·1095					
		23. 6	·1094					
		23. 59	·1096					
July 27		July 27		July 27		July 27		
0. 0	20. 52. 50	0. 0	·1096	0. 0	·03330	1. 0	65 ·1	65 ·0
1. 4	53. 50	0. 8	·1096	0. 21	·03297	3. 0	68 ·2	68 ·3
1. 46	53. 30	0. 48	·1098	3. 43	·02520	Max.	73 ·7	73 ·2
2. 37	50. 40	1. 45	·1103	4. 20	·02482	9. 0	72 ·2	72 ·0
2. 53	49. 30	2. 2	·1106	7. 25	·02292	18. 0	63 ·0	64 ·2
3. 53	48. 10	2. 13	·1103	10. 12	·02240	Min.	60 ·3	59 ·5
4. 59	45. 50	2. 23	·1109	13. 10	·02537	21. 0	61 ·9	62 ·2
6. 12	45. 25	2. 32	·1106	15. 30	·02835			
6. 18	45. 40	3. 0	·1104	18. 10	·03255			
6. 27	45. 10	3. 37	·1103	21. 18	·03380			
7. 38	45. 30	4. 41	·1096	22. 45	·03390			
7. 56	45. 55	5. 9	·1098	23. 59	·03320			
8. 17	45. 25	5. 15	·1096					
9. 29	46. 50	5. 28	·1095					
9. 44	45. 30	5. 53	·1098					
10. 12	47. 45	6. 9	·1101					
10. 22	46. 25	6. 44	·1102					
10. 53	46. 50	7. 4	·1098					
11. 18	46. 15	7. 42	·1096					
11. 46	47. 0	7. 47	·1098					
12. 3	46. 25	7. 54	·1096					
14. 5	46. 10	8. 9	·1098					
15. 3	46. 30	8. 19	·1097					
	***	8. 44	·1098					
17. 22	43. 30	9. 19	·1096					
18. 8	44. 10	9. 47	·1099					
18. 32	43. 30	10. 2	·1096					
19. 13	44. 40	10. 17	·1099					
19. 29	43. 55	10. 33	·1097					
19. 41	45. 0	10. 43	·1098					
19. 52	44. 25	11. 6	·1098					
20. 20	45. 5	11. 20	·1100					
20. 24	44. 25	11. 44	·1098					
20. 34	45. 20	12. 45	·1099					
21. 22	48. 30		(†)					
21. 33	48. 40	18. 28	·1098					
July 27		July 27						
h m	° ′ ″	h m		h m		h m	°	°
23. 6	20. 52. 50	19. 45	·1095					
23. 59	53. 35	20. 29	·1092					
		20. 48	·1092					
		21. 4	·1089					
		21. 23	·1089					
		22. 10	·1084					
		22. 25	·1084					
		22. 40	·1082					
		23. 0	·1085					
		23. 59	·1088					
July 28		July 28		July 28		July 28		
0. 0	20. 53. 35	0. 0	·1088	0. 0	·03320	1. 0	66 ·8	66 ·9
0. 43	52. 0	0. 5	·1089	1. 12	·03160	3. 0	70 ·6	70 ·2
1. 16	51. 50	0. 17	·1090	4. 0	·02390	Max.	77 ·6	77 ·3
2. 1	50. 0	0. 46	·1090	7. 15	·02140	9. 0	75 ·3	76 ·0
2. 39	47. 55	1. 2	·1083	10. 16	·02060	19. 0	65 ·0	66 ·0
3. 14	46. 30	1. 15	·1087	14. 0	·02340	Min.	63 ·0	62 ·4
3. 28	46. 35	1. 43	·1083	18. 50	·03136	21. 0	64 ·5	65 ·4
4. 46	44. 25		(†)	22. 57	·03215	22. 0	65 ·3	65 ·6
5. 52	43. 20	2. 33	·1081	23. 59	·03230	23. 0	65 ·5	65 ·9
6. 20	43. 45	3. 15	·1079					
6. 38	43. 30	3. 37	·1089					
7. 22	44. 25	3. 59	·1085					
7. 52	44. 40	4. 17	·1087					
9. 0	45. 35	4. 21	·1086					
9. 9	45. 0	6. 8	·1091					
9. 30	45. 45	6. 44	·1091					
10. 0	45. 15	7. 17	·1092					
10. 14	43. 55	8. 23	·1087					
10. 57	43. 45	8. 52	·1086					
11. 36	44. 20	9. 0	·1089					
12. 11	43. 35	9. 8	·1088					
13. 15	44. 20	9. 23	·1089					
	(†)	10. 6	·1085					
14. 22	46. 5	10. 25	·1090					
15. 17	46. 0	10. 59	·1089					
15. 59	47. 15	11. 10	·1087					
16. 53	43. 30	11. 38	·1089					
19. 37	40. 35	12. 39	·1084					
20. 12	41. 5	13. 48	·1090					
21. 32	43. 40	14. 43	·1089					
23. 59	51. 35	15. 23	·1091					
		15. 53	·1089					
		16. 44	·1094					
		20. 46	·1080					
		21. 29	·1086					
		22. 1	·1086					
		22. 13	·1089					
		23. 22	·1086					
		23. 25	·1088					
		23. 38	·1085					
		23. 59	·1087					
July 29		July 29		July 29		July 29		
0. 0	20. 51. 35	0. 0	·1087	0. 0	·03230	0. 0	66 ·5	66 ·7
0. 26	52. 25	1. 0	·1085	1. 34	·03140	1. 0	67 ·5	68 ·0
1. 38	52. 15	1. 25	·1085	7. 30	·02185	2. 0	69 ·1	69 ·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 29		July 29		July 29		July 29		
h m	° ′ ″	h m		h m		h m	°	°
2. 43	20. 50. 35	2. 53	·1091	12. 0:	·02143	3. 0	70·0	70·1
3. 22	49. 0	3. 1	·1089	15. 35	·02425	6. 0	73·6	73·3
3. 48	48. 35	3. 53	·1092	21. 3	·03120	Max.	74·8	74·5
5. 5	45. 40	4. 4	·1087	23. 59	·03124	9. 0	74·0	74·0
6. 18	45. 0	6. 0	·1091			12. 0	72·3	72·6
7. 44	45. 40	6. 10	·1093			18. 0	67·5	68·0
9. 59	45. 15	6. 19	·1091			Min.	64·3	64·0
10. 27	44. 10	8. 37	·1098			21. 0	65·8	66·6
11. 1	44. 20	9. 0	·1098			22. 0	66·5	66·6
11. 29	45. 40	9. 18	·1096			23. 0	67·0	67·2
12. 54	44. 40	9. 59	·1099					
14. 22	45. 5	11. 5	·1096					
15. 23	46. 25	11. 20	·1099					
16. 7	44. 40	11. 37	·1097					
16. 29	44. 50	11. 52	·1099					
17. 4	42. 15	12. 6	·1095					
17. 31	41. 25	12. 22	·1098					
17. 45	41. 40	13. 22	·1096					
17. 57	41. 0	13. 36	·1099					
18. 30	42. 50	13. 55	·1099					
18. 51	40. 40	14. 25	·1095					
19. 13	39. 50	14. 59	·1098					
19. 47	40. 20	15. 9	·1096					
19. 59	39. 55	15. 43	·1099					
20. 34	41. 10	15. 56	·1097					
21. 13	44. 0	16. 31	·1098					
21. 40	44. 5	16. 45	·1101					
21. 59	45. 10	18. 4	·1098					
22. 19	44. 55	18. 16	·1099					
23. 59	50. 45	19. 15	·1099					
		20. 51	·1087					
		21. 22	·1085					
		21. 59	·1088					
		22. 9	·1085					
		23. 59	·1083					
July 30		July 30		July 30		July 30		
0. 0	20. 50. 45	0. 0	·1083	0. 0	·03124	0. 0	68·2	68·2
0. 46	51. 25	0. 28	·1077	3. 19	·02710	1. 0	69·5	69·2
0. 57	52. 0	1. 4	·1081	6. 23	·02180	2. 0	70·2	70·3
1. 22	51. 40	1. 54	·1082	9. 22:	·02080	3. 0	71·3	71·5
2. 15	52. 55	2. 14	·1088	11. 46	·02217	Max.	76·3	76·0
2. 46	51. 30	2. 28	·1089	12. 0	·02220	9. 0	74·3	74·1
3. 47	49. 35	2. 49	·1094	13. 23	·02370	18. 0	63·8	64·8
4. 1	48. 30	3. 13	·1092	17. 10	·03140	Min.	59·6	59·1
4. 48	47. 40	3. 31	·1100	21. 19	·03343	21. 0	62·0	62·5
5. 18	47. 55	4. 0	·1092	23. 26	·03370			
6. 52	45. 15	4. 23	·1100	23. 59	·03350			
7. 39	46. 35	4. 47	·1100					
9. 53	46. 15	5. 17	·1108					
10. 40	46. 30	5. 25	·1105					
11. 10	44. 25	5. 34	·1107					
11. 43	46. 0	5. 54	·1101					
12. 5	43. 50	6. 15	·1101					
12. 44	43. 25	6. 23	·1100					
12. 54	44. 25	6. 46	·1098					
13. 30	44. 5	7. 29	·1098					
13. 49	45. 30	8. 2	·1094					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 30		July 30						
h m	° ′ ″	h m		h m		h m	°	°
14. 41	20. 45. 30	8. 43	·1094					
15. 0	46. 55	8. 56	·1095					
	***	9. 43	·1096					
16. 8	44. 25	10. 8	·1099					
16. 31	45. 5	11. 8	·1096					
17. 0	43. 55	11. 23	·1097					
	***	11. 37	·1110					
18. 3	44. 0	12. 17	·1096					
18. 20	45. 25	12. 50	·1093					
18. 33	44. 15	13. 4	·1089					
19. 1	47. 0	13. 15	·1088					
20. 2	45. 30	14. 39	·1087					
20. 52	45. 0	16. 42	·1092					
21. 0	45. 35	18. 28	·1082					
21. 8	44. 40	18. 52	·1083					
22. 3	48. 10	19. 23	·1087					
22. 54	49. 15	19. 39	·1084					
23. 38	52. 10	20. 8	·1085					
23. 51	52. 0	20. 38	·1086					
23. 59	52. 40	21. 9	·1084					
		21. 29	·1088					
		21. 52	·1087					
		22. 0	·1084					
		22. 17	·1082					
		23. 9	·1088					
			(†)					
		23. 59	·1091					
July 31		July 31		July 31		July 31		
0. 0	20. 52. 40	0. 0	·1091	0. 0	·03350	1. 0	65·5	65·5
0. 19	52. 5	0. 22	·1088	2. 10	·03120	3. 0	67·8	68·1
0. 32	52. 55	0. 35	·1093	6. 53	·02297	Max.	71·6	72·4
1. 58	49. 50	1. 5	·1087	10. 29:	·02260	9. 0	70·6	70·7
2. 10	50. 0	1. 14	·1088	13. 38	·02537	18. 0	62·0	63·0
2. 26	49. 0	1. 23	·1084	13. 55	·02540	Min.	60·0	59·6
2. 34	49. 30	1. 35	·1085	18. 14	·03280	21. 0	61·0	61·8
2. 43	48. 45		(†)	21. 40	·03387			
3. 2	47. 35	3. 0	·1091*	23. 43	·03380			
4. 38	45. 40	3. 32	·1085	23. 59	·03360			
5. 2	46. 15	3. 47	·1088					
6. 30	46. 10	4. 4	·1083					
7. 37	45. 5	4. 47	·1078					
7. 52	46. 0	5. 7	·1085					
8. 0	45. 25	5. 24	·1084					
8. 13	45. 55	5. 39	·1089					
8. 22	45. 5	7. 11	·1092					
8. 28	46. 10	7. 43	·1088					
10. 8	46. 5	7. 55	·1091					
10. 43	43. 25	8. 9	·1088					
12. 26	47. 10	8. 22	·1091					
13. 22	45. 50	8. 39	·1088					
13. 38	57. 5	9. 17	·1092					
14. 42	43. 30	9. 29	·1088					
15. 14	45. 10	9. 39	·1090					
15. 27	43. 30	9. 53	·1088					
16. 2	44. 45	10. 17	·1092					
16. 41	41. 25	10. 30	·1088					
16. 58	42. 0	11. 30	·1089					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 31		July 31						
h m	° ′ ″	h m		h m		h m	°	°
17. 12	20. 40. 50	11. 38	·1087					
18. 10	41. 45	12. 57	·1094					
18. 22	40. 50	13. 32	·1094					
19. 12	42. 0	13. 50	·1105					
19. 23	43. 20	14. 52	·1089					
19. 36	42. 40	15. 9	·1090					
20. 16	43. 40	15. 19	·1094					
20. 31	44. 30	15. 31	·1092					
20. 43	44. 20	15. 53	·1092					
21. 19	46. 45	16. 13	·1095					
21. 28	47. 55	16. 55	·1093					
21. 40	47. 20	17. 24	·1094					
22. 22	48. 25	17. 40	·1093					
22. 30	49. 25	17. 53	·1094					
22. 38	49. 5	18. 21	·1093					
22. 45	49. 50	18. 44	·1095					
22. 52	49. 10	19. 9	·1091					
22. 59	51. 30	19. 17	·1093					
23. 6	50. 55	19. 38	·1089					
23. 51	56. 55	19. 49	·1089					
23. 56	55. 0	20. 16	·1086					
23. 59	56. 15	20. 23	·1087					
		21. 0	·1083					
		21. 23	·1088					
		21. 39	·1084					
		22. 7	·1085					
			(†)					
		23. 2	·1078					
		23. 29	·1066					
		23. 59	·1075					
Aug. 1		Aug. 1		Aug. 1		Aug. 1		
0. 0	20. 56. 15	0. 0	·1075	0. 0	·03360	1. 0	65·8	65·9
0. 10	54. 35	0. 7	·1082	1. 43	·03121	3. 0	69·0	69·0
0. 23	53. 30	0. 34	·1087	5. 26	·02332	Max.	72·6	73·0
0. 28	54. 0	0. 40	·1095	7. 40	·02225	9. 0	70·8	71·0
0. 32	53. 0	1. 0	·1086	9. 40	·02213	Min.	62·8	62·3
0. 40	54. 25	1. 32	·1079	14. 10.	·02458	21. 0	64·9	65·0
0. 46	53. 15	2. 0	·1088	19. 24	·03078			
1. 19	52. 25	2. 27	·1092	21. 2	·03210			
1. 23	53. 20	2. 43	·1090	21. 12	·03200			
1. 28	51. 35	3. 30	·1096	22. 55	·03221			
1. 33	52. 10	3. 43	·1091	23. 59	·03202			
2. 50	52. 0	4. 8	·1098					
3. 23	50. 35	4. 13	·1097					
3. 32	49. 30	4. 23	·1105					
3. 41	50. 10	4. 38	·1088					
4. 8	49. 35	4. 44	·1093					
4. 16	50. 45	4. 59	·1081					
4. 30	48. 15	5. 7	·1084					
4. 37	49. 0	5. 30	·1081					
4. 44	48. 0	5. 45	·1080					
5. 23	46. 10	6. 59	·1094					
5. 29	46. 50	7. 9	·1089					
6. 37	46. 45	7. 21	·1091					
7. 37	45. 0	7. 32	·1084					
	***	7. 38	·1086					
8. 32	46. 50	7. 42	·1083					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 1		Aug. 1						
h m	° ′ ″	h m		h m		h m	°	°
9. 14	20. 42. 55	8. 1	·1088					
9. 18	41. 25	8. 26	·1086					
9. 38	44. 0	8. 44	·1087					
9. 46	43. 25	8. 57	·1098					
10. 1	44. 15	9. 27	·1103					
11. 7	45. 0	10. 1	·1089					
11. 17	44. 15	10. 38	·1084					
12. 23	44. 30	10. 56	·1086					
12. 37	43. 25	11. 18	·1083					
12. 58	45. 30	11. 52	·1084					
13. 49	44. 0	12. 21	·1084					
14. 43	44. 5	14. 4	·1091					
14. 53	43. 0	14. 19	·1087					
15. 5	44. 35	14. 45	·1088					
15. 24	41. 30	15. 0	·1091					
15. 30	42. 25	15. 38	·1088					
15. 45	42. 0	15. 56	·1092					
16. 1	45. 0	16. 12	·1088					
16. 21	42. 5	16. 28	·1094					
16. 38	42. 35		***					
17. 1	40. 35	19. 15	·1080					
17. 40	40. 30	19. 23	·1081					
17. 47	39. 55	19. 50	·1077					
17. 52	40. 45	20. 59	·1080					
18. 0	39. 20	21. 32	·1075					
18. 8	40. 15	21. 41	·1078					
18. 20	39. 10	21. 53	·1076					
18. 29	40. 10	22. 8	·1076					
18. 32	39. 5	22. 53	·1084					
18. 43	39. 40	23. 5	·1079					
18. 58	41. 25	23. 11	·1085					
19. 13	40. 35	23. 31	·1073					
19. 34	42. 40		(†)					
20. 43	42. 30							
21. 39	46. 50							
22. 2	47. 30							
22. 47	51. 30							
22. 52	52. 40							
22. 58	52. 25							
23. 5	54. 0							
23. 11	53. 30							
23. 21	54. 25							
23. 30	53. 20							
23. 32	54. 25							
23. 43	53. 20							
23. 59	57. 0							
Aug. 2		Aug. 2		Aug. 2		Aug. 2		
0. 0	20. 57. 0		(†)	0. 0	·03202	1. 0	68·0	68·2
0. 9	56. 5	0. 16	·1081	1. 2	·03138	Max.	75·2	76·2
0. 37	56. 0	0. 39	·1082	2. 26	·02959	9. 0	75·0	75·2
0. 48	57. 25	0. 57	·1093	6. 26	·02222	18. 0	68·5	69·2
0. 57	56. 10	1. 3	·1087	8. 31	·02105	Min.	65·7	65·3
1. 4	57. 40	1. 7	·1099	9. 28	·02086	21. 0	67·0	68·0
1. 28	57. 45	1. 58	·1083	9. 57	·02004			
2. 1	54. 50	2. 15	·1083	13. 11	·02190			
2. 15	54. 25	2. 23	·1098	15. 48	·02460			
2. 22	55. 45	2. 39	·1080	16. 55	·02561			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Aug. 2		Aug. 2		Aug. 2				
h m	° ′ ″	h m		h m		h m	°	°
2. 30	20. 54. 10	2. 50	·1089	19. 1	·02891			
2. 35	54. 30	3. 3	·1083	20. 44	·03092			
2. 41	52. 35	3. 20	·1091	21. 42	·03113			
2. 45	53. 35	3. 41	·1092	23. 37	·03110			
3. 0	51. 45	3. 47	·1086	23. 59	·03092			
3. 15	51. 35	4. 4	·1093					
3. 44	50. 0	4. 38	·1094					
3. 56	50. 25	4. 45	·1085					
4. 25	49. 30	4. 51	·1097					
4. 38	48. 25	5. 8	·1084					
4. 43	49. 0	5. 20	·1089					
4. 49	47. 35	5. 41	·1089					
5. 1	47. 0	5. 46	·1086					
5. 37	46. 45	5. 51	·1094					
5. 44	47. 25	5. 55	·1089					
5. 49	46. 5	6. 5	·1086					
5. 59	45. 30	6. 20	·1093					
6. 10	46. 15	6. 27	·1088					
6. 30	44. 30	6. 28	·1088					
7. 26	46. 15	6. 41	·1094					
7. 33	45. 20	6. 50	·1090					
7. 44	47. 5	7. 8	·1094					
7. 56	45. 0	7. 17	·1090					
8. 1	46. 5	7. 30	·1097					
8. 30	45. 10	7. 44	·1093					
8. 41	44. 0	7. 52	·1096					
9. 0	45. 40	8. 5	·1092					
9. 12	44. 25	8. 19	·1093					
9. 25	47. 25	8. 41	·1082					
9. 32	44. 30	8. 58	·1086					
9. 54	54. 25	9. 22	·1076					
10. 11	43. 35	9. 43	·1033					
10. 25	44. 5	10. 0	·1094					
10. 40	39. 0	10. 30	·1073					
10. 53	39. 30	10. 53	·1085					
11. 0	41. 5	11. 10	·1074					
11. 17	40. 20	11. 28	·1077					
12. 30	42. 25	11. 47	·1072					
12. 41	41. 30	12. 8	·1074					
12. 58	43. 40	12. 22	·1070					
13. 7	43. 5	12. 39	·1079					
13. 11	44. 5	12. 53	·1078					
13. 26	42. 5	13. 0	·1072					
13. 50	46. 0	13. 19	·1073					
14. 48	44. 0	13. 27	·1070					
15. 7	42. 30	14. 0	·1081					
15. 17	43. 40	14. 9	·1077					
15. 34	43. 0	15. 26	·1079					
16. 8	46. 10	15. 51	·1086					
16. 29	43. 25	16. 0	·1083					
16. 45	46. 30	16. 31	·1091					
16. 55	45. 0	16. 40	·1088					
17. 3	45. 25	17. 10	·1088					
17. 17	42. 30	17. 40	·1080					
18. 5	39. 45	18. 4	·1081					
18. 15	41. 30	18. 20	·1079					
18. 21	39. 30	18. 38	·1079					
18. 24	41. 0	18. 50	·1081					
Aug. 2		Aug. 2						
h m	° ′ ″	h m		h m		h m		
18. 31	20. 39. 0	19. 13	·1075					
18. 38	40. 10	19. 55	·1072					
18. 47	38. 55	20. 8	·1062					
19. 11	41. 40	20. 18	·1065					
19. 36	40. 20	20. 38	·1052					
19. 41	41. 15	20. 51	·1054					
19. 53	39. 0	21. 23	·1048					
20. 0	39. 5	21. 38	·1056					
20. 6	40. 35	22. 34	·1071					
20. 37	42. 0	22. 44	·1070					
20. 52	45. 10	23. 17	·1074					
21. 0	43. 45		(†)					
21. 43	49. 50							
23. 1	49. 10							
23. 37	49. 40							
23. 42	51. 5							
23. 55	50. 25							
23. 59	50. 30							
Aug. 3		Aug. 3		Aug. 3		Aug. 3		
0. 0	20. 50. 30		(†)	0. 0	·03092	1. 0	70·1	70·2
0. 38	51. 15	0. 9	·1078	2. 54	·02900	3. 0	71·5	71·8
0. 56	51. 5	1. 12	·1086	7. 3	·02527	Max.	73·4	74·0
1. 23	53. 20	1. 49	·1080	9. 15:	·02398	9. 0	73·4	73·5
1. 45	51. 45	2. 8	·1082	11. 28	·02437	18. 0	66·8	67·2
1. 56	52. 10	2. 32	·1086	14. 24:	·02683	Min.	64·3	64·0
2. 8	51. 35	3. 0	·1078	17. 39	·03148	21. 0	66·6	67·0
2. 22	52. 5	3. 5	·1089	18. 45	{·03180			
2. 48	50. 50	3. 9	·1079		{·03132			
2. 56	51. 10	3. 15	·1085	19. 12	{·03185			
3. 0	50. 10	3. 27	·1085		{·03138			
3. 7	51. 25	3. 55	·1074	19. 43	·03179			
3. 37	49. 30	5. 37	·1082	20. 54	·03194			
4. 8	48. 35	5. 49	·1089	22. 10	·03178			
4. 31	47. 10	6. 4	·1086	23. 59	·02997			
5. 40	46. 5	6. 25	·1092					
5. 52	45. 25	6. 33	·1089					
6. 0	45. 40	6. 53	·1099					
6. 12	44. 40	7. 17	·1087					
6. 58	43. 25	7. 23	·1089					
7. 11	44. 40	8. 0	·1082					
7. 22	44. 15	8. 5	·1084					
7. 53	44. 5	8. 13	·1079					
8. 29	42. 30	8. 21	·1079					
8. 45	44. 30	8. 36	·1087					
9. 19	43. 0	8. 44	·1085					
9. 54	45. 0	8. 51	·1087					
	***	9. 18	·1079					
11. 0	43. 40	9. 34	·1079					
11. 15	45. 25	9. 43	·1083					
11. 33	42. 35	9. 49	·1082					
12. 11	44. 45	10. 13	·1088					
13. 10	43. 10	10. 33	·1084					
13. 37	43. 10	10. 47	·1087					
13. 58	41. 30	10. 53	·1085					
14. 7	41. 35	11. 15	·1099					
14. 30	43. 35	11. 57	·1088					
14. 38	43. 5	12. 2	·1089					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 3		Aug. 3						
h m	° ′ ″	h m		h m		h m	°	°
15. 8	20. 45. 35	12. 17	·1084					
	***	12. 38	·1084					
17. 13	41. 20	12. 53	·1087					
17. 22	42. 35	13. 2	·1086					
17. 41	41. 15		***					
18. 3	39. 55	13. 45	·1088					
18. 22	42. 0	13. 53	·1085					
18. 30	40. 25	14. 22	·1082					
18. 59	38. 35	14. 34	·1083					
19. 5	40. 15	14. 51	·1082					
19. 21	40. 40	15. 9	·1086					
20. 2	42. 50	15. 40	·1088					
20. 32	44. 55	15. 52	·1086					
20. 45	44. 25	16. 30	·1088					
20. 58	45. 25		***					
22. 18	46. 50	17. 14	·1084					
22. 23	48. 40	17. 23	·1087					
22. 45	49. 0	18. 4	·1085					
22. 52	48. 15	18. 23	·1087					
23. 5	50. 10		***					
23. 33	48. 0	19. 6	·1084					
23. 56	48. 25	19. 26	·1085					
23. 59	48. 50	20. 28	·1083					
		20. 44	·1080					
		21. 20	·1081					
			***					
		22. 55	·1064					
		23. 4	·1071					
		23. 23	·1074					
		23. 59	·1079					
Aug. 4		Aug. 4		Aug. 4		Aug. 4		
0. 0	20. 48. 50	0. 0	·1079	0. 0	·02997	1. 0	71 ·0	71 ·2
0. 23	51. 10	0. 24	·1084	2. 6	·02712	3. 0	71 ·6	71 ·6
0. 38	50. 35	0. 29	·1080	2. 52	·02653	Max.	73 ·0	73 ·0
1. 1	50. 40	1. 41	·1088	3. 42	·02624	9. 0	72 ·0	73 ·0
	(†)	2. 25	·1087	7. 13	·02445	18. 30	67 ·5	68 ·5
3. 0	52. 49*	2. 46	·1074	8. 50	·02397	Min.	65 ·2	65 ·0
3. 58	48. 30	2. 57	·1092	9. 44	·02390	21. 0	66 ·4	67 ·0
4. 30	49. 0	3. 7	·1082	14. 5	·02584	22. 0	66 ·9	67 ·0
5. 2	46. 50	3. 10	·1094	17. 42	·02956	23. 0	67 ·0	67 ·2
5. 14	48. 25	3. 12	·1082	19. 9	·03060			
5. 30	46. 10	3. 20	·1090		(†)			
6. 54	45. 25	3. 32	·1077	20. 47	·03138			
7. 8	44. 45	3. 36	·1085	22. 27	·03140			
7. 22	45. 0		***		·03068			
7. 32	44. 10	4. 15	·1069	23. 59	·02950			
8. 13	44. 40	4. 32	·1087					
8. 16	43. 15		***					
8. 47	41. 50	5. 7	·1078					
9. 7	38. 30	5. 17	·1095					
9. 17	40. 30	5. 44	·1086					
9. 32	41. 5	5. 48	·1088					
9. 59	40. 30	5. 54	·1085					
10. 15	42. 5	6. 43	·1094					
10. 32	40. 35	6. 52	·1099					
10. 53	40. 55	7. 7	·1097					
11. 22	43. 50	7. 22	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 4		Aug. 4						
h m	° ′ ″	h m		h m		h m	°	°
11. 37	20. 43. 45	7. 38	·1101					
12. 58	46. 5	7. 42	·1103					
13. 5	47. 0	7. 48	·1099					
	***	8. 18	·1094					
14. 7	43. 55	8. 28	·1097					
14. 28	44. 30	8. 47	·1086					
	***	8. 58	·1085					
15. 42	44. 0	9. 26	·1101					
16. 11	44. 30	10. 19	·1089					
17. 27	41. 50	11. 2	·1086					
	***	11. 12	·1089					
18. 37	43. 15	11. 22	·1085					
19. 36	40. 50	12. 23	·1092					
19. 39	42. 0	12. 43	·1096					
20. 0	41. 5	13. 9	·1091					
20. 18	41. 25	13. 30	·1095					
20. 47	43. 10	14. 20	·1090					
21. 38	44. 0	15. 45	·1093					
22. 30	44. 5	15. 54	·1090					
23. 59	47. 10	16. 6	·1092					
		18. 0	·1088					
		18. 35	·1092					
		19. 8	·1088					
		19. 30	·1089					
		19. 54	·1083					
		20. 5	·1084					
		20. 36	·1080					
		21. 28	·1076					
		22. 6	·1075					
		22. 16	·1078					
		22. 23	·1077					
		22. 55	·1081					
			(†)					
Aug. 5		Aug. 5		Aug. 5		Aug. 5		
0. 0	20. 47. 10		(†)	0. 0	·02950	0. 0	67 ·1	67 ·5
0. 59	50. 5	0. 30	·1089	0. 51	·02964	1. 0	67 ·5	68 ·0
2. 30	50. 0	1. 42	·1082	2. 23	·02960	2. 0	68 ·0	68 ·5
4. 3	46. 30	3. 47	·1087	4. 38	·02843	3. 0	68 ·3	68 ·7
4. 30	46. 35		(†)		(†)	6. 0	70 ·6	70 ·7
5. 1	45. 30	9. 0	·1090*	9. 0	·02486*	Max.	71 ·3	71 ·6
5. 52	45. 0	9. 53	·1092	10. 0	·02477	9. 0	71 ·3	71 ·0
	(†)	10. 0	·1094	15. 14	·02646	12. 0	70 ·3	70 ·3
9. 0	44. 45*	10. 30	·1089	15. 52	·02690	18. 10	67 ·3	68 ·2
9. 53	43. 55	11. 22	·1089	16. 24	·02698	Min.	65 ·1	65 ·0
10. 34	44. 50	11. 57	·1094	20. 23	·02990	21. 0	66 ·0	67 ·0
10. 44	44. 25	12. 13	·1089	23. 17	·03073	22. 0	66 ·5	67 ·8
12. 8	45. 10	13. 2	·1095		·02930	23. 0	66 ·7	67 ·8
12. 15	44. 15	13. 35	·1093	23. 59	·02868			
12. 52	45. 10	13. 42	·1095					
13. 44	43. 30	14. 21	·1092					
13. 56	42. 10	15. 2	·1092					
14. 47	42. 35	15. 22	·1086					
15. 0	41. 0	15. 38	·1087					
15. 17	42. 40	16. 10	·1104					
15. 38	47. 15	17. 11	·1082					
15. 55	47. 25	17. 35	·1093					
16. 16	44. 0	18. 0	·1090					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 5		Aug. 5						
h m	° ′ ″	h m				h m	°	°
16. 38	20. 42. 30	18. 22	·1096					
17. 12	45. 30	18. 44	·1091					
17. 39	46. 50	19. 2	·1093					
18. 2	41. 40	19. 23	·1086					
18. 8	42. 5	21. 2	·1087					
18. 23	40. 30	21. 44	·1078					
18. 38	42. 0		(†)					
18. 45	41. 5	23. 59	·1080					
19. 7	42. 55							
19. 52	41. 25							
20. 30	41. 20							
21. 23	43. 5							
22. 7	46. 20							
23. 51	49. 15							
23. 56	50. 50							
23. 59	50. 0							
Aug. 6		Aug. 6		Aug. 6		Aug. 6		
0. 0	20. 50. 0	0. 0	·1080	0. 0	·02868	0. 0	67 ·0	68 ·0
0. 3	49. 30	0. 10	·1082	1. 0	·02868	1. 0	67 ·2	68 ·3
0. 8	50. 20	0. 30	·1082	2. 42	·02836	2. 0	68 ·0	69 ·0
0. 27	50. 10	1. 8	·1092	5. 7	·02730	3. 0	68 ·3	69 ·5
0. 58	53. 35	1. 47	·1077	7. 14	·02584	Max.	70 ·7	71 ·4
1. 17	53. 45	1. 55	·1083	9. 7	·02519	9. 0	70 ·7	71 ·4
1. 40	52. 25	2. 8	·1083	10. 22	·02497	19. 0	67 ·6	68 ·6
1. 46	52. 55	2. 16	·1086	13. 47	·02567	Min.	66 ·5	66 ·3
2. 16	50. 0	2. 22	·1084	14. 13	·02525	21. 0	67 ·8	69 ·0
2. 52	50. 55	3. 0	·1104	18. 7	·02740			
3. 8	49. 30	3. 13	·1097	21. 6	·02778			
3. 30	49. 30	3. 37	·1107	22. 2	·02758			
3. 49	47. 55	3. 53	·1101	22. 51	{·02710			
3. 59	48. 35	4. 8	·1107		{·02536			
4. 23	46. 25	4. 17	·1107	23. 10	·02520			
4. 46	44. 50	4. 30	·1099		(†)			
5. 7	44. 50	5. 1	·1113					
5. 36	43. 35	5. 23	·1112					
5. 49	44. 5	5. 38	·1106					
6. 18	43. 50	5. 59	·1102					
6. 37	45. 0	6. 15	·1105					
7. 18	44. 35	6. 31	·1103					
7. 58	45. 20	6. 43	·1107					
8. 8	44. 30	7. 8	·1101					
8. 23	44. 25	7. 11	·1104					
8. 58	46. 0	7. 22	·1101					
9. 0	44. 10	7. 30	·1102					
9. 5	44. 35	7. 54	·1099					
9. 14	42. 5	8. 5	·1096					
9. 17	42. 30	8. 23	·1096					
9. 27	41. 10	8. 34	·1098					
9. 48	43. 35	8. 43	·1097					
9. 57	43. 10	9. 38	·1113					
10. 14	44. 20	10. 19	·1088					
10. 37	40. 55	10. 43	·1095					
11. 0	42. 20	10. 51	·1092					
11. 21	41. 40	11. 0	·1096					
11. 35	42. 35	11. 21	·1090					
12. 10	38. 10	11. 43	·1093					
12. 26	38. 35	12. 21	·1089					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 6		Aug. 6						
h m	° ′ ″	h m		h m		h m	°	°
12. 37	20. 40. 0	12. 31	·1093					
12. 49	39. 20	13. 4	·1100					
13. 0	35. 40	13. 12	·1098					
13. 17	35. 15	13. 21	·1101					
13. 39	40. 50	13. 37	·1098					
13. 53	46. 40	13. 53	·1115					
14. 12	41. 20	14. 9	·1100					
14. 21	42. 30	14. 25	·1096					
14. 32	39. 55	14. 37	·1100					
14. 52	40. 25	15. 47	·1085					
15. 0	39. 30	15. 53	·1089					
15. 28	40. 10	16. 14	·1091					
15. 47	42. 55	16. 20	·1089					
15. 52	42. 35	16. 37	·1092					
16. 2	43. 10		***					
16. 18	42. 20	17. 23	·1080					
16. 37	40. 0	17. 47	·1080					
16. 45	37. 35	17. 54	·1074					
16. 57	37. 40	18. 5	·1079					
17. 8	40. 0		***					
17. 27	39. 25	18. 35	·1072					
17. 47	40. 15	19. 2	·1083					
17. 58	42. 0	19. 32	·1079					
18. 22	48. 0	19. 38	·1080					
18. 27	46. 25	19. 50	·1077					
18. 32	47. 0		***					
18. 45	43. 15	20. 32	·1078					
19. 14	44. 40	21. 21	·1076					
19. 23	44. 10	21. 39	·1074					
19. 30	42. 40	22. 12	·1075					
19. 43	43. 50	22. 14	·1072					
19. 52	43. 5	22. 30	·1074					
20. 36	41. 15	23. 2	·1057					
20. 46	42. 15	23. 23	·1065					
20. 51	41. 15	23. 45	·1074					
21. 45	42. 30	23. 52	·1070					
22. 54	46. 15	23. 59	·1075					
23. 54	49. 40							
23. 59	49. 5							
Aug. 7		Aug. 7		Aug. 7		Aug. 7		
0. 0	20. 49. 5	0. 0	·1075		(†)	1. 0	71 ·4	72 ·2
0. 26	50. 0	0. 14	·1081	0. 9	·02460	3. 0	74 ·2	74 ·1
0. 57	49. 30	0. 23	·1076	1. 28	·02299	Max.	77 ·0	77 ·7
1. 22	52. 30		(†)	2. 13	·02272	9. 0	77 ·0	77 ·7
1. 30	51. 35	1. 0	·1077*	3. 39	·02162	18. 0	72 ·2	73 ·0
1. 43	52. 20	1. 45	·1079	7. 2	·02015	Min.	70 ·0	69 ·8
1. 56	51. 40	1. 55	·1074	9. 7	{·01973	21. 0	71 ·0	72 ·0
2. 5	53. 0	2. 17	·1082		{·02040			
2. 31	52. 30	2. 42	·1066	10. 27	·02000			
2. 43	50. 0	3. 20	·1087	11. 11	·02009			
2. 50	50. 5	3. 38	·1088	11. 36	·01980			
3. 0	48. 55	3. 57	·1086	15. 41	·02203			
3. 15	48. 35	4. 18	·1088	20. 13	·02635			
3. 38	49. 25	4. 28	·1093	22. 38	·02723			
4. 13	48. 35	4. 38	·1089	23. 59	·02700			
4. 28	49. 0	5. 0	·1087					
4. 54	47. 5	5. 17	·1090					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Aug. 7	
h m	° ′ ″
5. 14	20. 47. 5
5. 44	45. 30
7. 18	44. 35
7. 42	45. 0
8. 23	43. 25
8. 45	38. 0
9. 10	36. 0
9. 23	36. 15
10. 11	44. 40
11. 12	44. 25
11. 48	44. 35
12. 36	44. 25
13. 19	42. 30
13. 48	43. 0
14. 38	50. 25
15. 38	41. 50
16. 6	42. 0
16. 23	43. 45
16. 53	42. 50
17. 3	43. 10
17. 17	41. 30
17. 36	42. 35
17. 47	41. 30
17. 54	42. 40
18. 5	43. 0
18. 26	43. 25
18. 31	42. 5
18. 38	43. 10
18. 49	42. 0
	***
19. 13	41. 45
19. 48	40. 55
20. 14	41. 30
20. 26	40. 15
21. 0	43. 50
21. 25	43. 35
21. 43	45. 20
22. 11	46. 10
23. 8	49. 55
23. 13	49. 30
23. 52	52. 20
23. 59	51. 25
Aug. 8	
0. 0	20. 51. 25
0. 36	52. 50
0. 45	52. 0
1. 0	51. 50
1. 24	53. 0
1. 52	51. 50
2. 7	52. 30
2. 15	51. 30
3. 15	49. 10

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 7	
h m	
5. 38	·1083
5. 53	·1088
6. 34	·1084
6. 46	·1089
7. 8	·1091
8. 0	·1086
8. 24	·1098
8. 53	·1094
9. 31	·1083
9. 54	·1083
10. 8	·1078
10. 31	·1084
10. 45	·1080
11. 0	·1086
11. 18	·1084
11. 30	·1086
11. 55	·1085
12. 8	·1087
12. 19	·1084
12. 48	·1083
13. 18	·1088
14. 20	·1080
14. 29	·1075
14. 45	·1078
15. 20	·1094
16. 8	·1078
16. 18	·1078
16. 24	·1076
16. 32	·1080
16. 36	·1076
16. 41	·1079
17. 11	·1078
17. 27	·1074
17. 36	·1076
17. 43	·1070
17. 53	·1073
18. 25	·1073
18. 29	·1081
18. 35	·1075
18. 39	·1082
18. 51	·1076
19. 7	·1077
19. 34	·1073
20. 14	·1074
20. 39	·1072
21. 0	·1062
	(†)
Aug. 8	
1. 0	·1069
1. 0	·1077
1. 16	·1072
1. 36	***
3. 54	·1079
4. 9	·1074
4. 25	·1083
4. 36	·1080

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Aug. 8	
0. 0	·02700
2. 52	·02587
4. 31	·02396
7. 57	·02014
10. 12	·01965
12. 23	·02240
14. 9	·02400
17. 40	·02922
20. 36	·03020

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Aug. 8		
1. 0	74 ·3	74 ·7
3. 0	75 ·3	75 ·6
Max.	77 ·2	78 ·0
9. 0	77 ·2	78 ·0
Min.	67 ·0	66 ·7
22. 0	68 ·7	70 ·0

Greenwich Mean Solar Time.	Western Declination.
Aug. 8	
h m	° ′ ″
3. 50	20. 48. 40
4. 11	47. 30
4. 23	47. 40
4. 35	46. 40
4. 41	47. 0
5. 40	45. 40
6. 1	46. 5
6. 29	45. 20
7. 16	45. 30
8. 13	45. 50
8. 37	45. 30
9. 45	45. 20
9. 54	44. 25
	(†)
11. 21	45. 10
11. 51	44. 40
13. 52	47. 30
14. 23	44. 40
15. 8	49. 25
15. 56	45. 50
16. 44	46. 0
16. 50	46. 30
16. 58	45. 30
17. 16	44. 50
17. 26	45. 10
17. 49	42. 5
18. 5	40. 55
18. 15	42. 10
18. 26	42. 0
18. 30	42. 30
19. 7	43. 5
19. 38	41. 40
19. 43	43. 10
19. 50	40. 10
20. 0	39. 15
20. 49	43. 5
21. 1	42. 15
21. 9	43. 0
21. 24	42. 40
21. 39	44. 25
21. 47	44. 0
22. 17	47. 15
23. 20	51. 45
23. 40	52. 20
23. 59	53. 10
Aug. 9	
0. 0	20. 53. 10
0. 18	54. 0
0. 30	53. 25
1. 13	55. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 8	
h m	
4. 47	·1084
4. 59	·1081
5. 10	·1083
5. 25	·1081
6. 1	·1085
7. 6	·1085
7. 20	·1087
8. 28	·1082
8. 40	·1084
8. 58	·1082
9. 18	·1084
9. 28	·1080
9. 35	·1085
9. 47	·1084
9. 53	·1087
10. 6	·1083
10. 38	·1080
11. 41	·1084
12. 0	·1088
12. 30	·1089
12. 57	·1085
13. 24	·1089
13. 33	·1088
13. 52	·1090
14. 9	·1086
14. 28	·1085
14. 50	·1078
	***
15. 49	·1083
16. 8	·1082
16. 23	·1085
17. 13	·1088
17. 30	·1083
17. 52	·1080
18. 6	·1082
18. 20	·1079
19. 10	·1082
19. 25	·1080
19. 31	·1082
19. 39	·1077
20. 5	·1079
20. 29	·1074
20. 46	·1068
21. 5	·1067
21. 32	·1077
21. 44	·1076
21. 49	·1080
21. 55	·1076
22. 52	·1079
23. 8	·1078
23. 16	·1084
23. 59	·1087
Aug. 9	
0. 0	·1087
0. 20	·1088
0. 39	·1079
1. 2	·1086

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 8	
h m	
23. 59	·03034
Aug. 9	
0. 0	·03034
1. 56	·02940
2. 55	·02822
6. 21	·02046

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Aug. 9		
0. 0	69 ·5	70 ·1
Max.	79 ·0	80 ·0
8. 0	79 ·0	79 ·3
18. 0	72 ·2	73 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Aug. 9	
h m	° ′ ″
1. 37	20. 51. 55
1. 54	54. 5
3. 1	49. 25
5. 11	45. 0
6. 47	44. 45
7. 2	44. 15
7. 27	44. 35
8. 1	43. 55
8. 22	44. 25
8. 38	40. 40
8. 54	45. 0
9. 11	45. 30
9. 40	44. 5
10. 17	44. 25
	(†)
11. 23	44. 20
12. 13	43. 25
12. 49	44. 45
13. 44	43. 40
14. 59	45. 25
16. 58	43. 30
17. 58	42. 0
18. 10	42. 50
18. 16	41. 55
	***
18. 45	41. 30
19. 6	39. 55
19. 22	41. 0
20. 58:	42. 5
22. 12	47. 15
23. 59	50. 30
Aug. 10	
0. 0	20. 50. 30
1. 1	51. 0
1. 28	50. 35
1. 39	51. 30
2. 3	50. 0
3. 11	50. 10
3. 40	48. 15
5. 2	44. 50
6. 16	44. 15
9. 29	45. 25
10. 1	44. 10
10. 32	44. 20
10. 55	46. 35
11. 30	43. 50
12. 13	46. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 9	
h m	
1. 7	·1082
1. 24	·1086
1. 39	·1083
2. 6	·1101
2. 39	·1089
3. 7	·1089
3. 52	·1092
4. 26	·1088
4. 53	·1090
5. 17	·1086
5. 23	·1095
5. 26	·1084
5. 30	·1096
5. 34	·1089
5. 58	·1083
6. 50	·1089
7. 8	·1083
7. 22	·1083
7. 38	·1088
8. 26	·1077
8. 45	·1097
9. 14	·1078
9. 40	·1076
9. 53	·1073
10. 15	·1079
12. 0	·1074
12. 50	·1079
13. 43	·1079
16. 8	·1084
17. 48	·1079
18. 3	·1080
19. 15	·1074
19. 38	·1073
21. 0	·1067
21. 41	·1068
22. 17	·1071
22. 35	·1074
22. 53	·1073
23. 21	·1078
23. 53	·1079
23. 59	·1080
Aug. 10	
0. 0	·1080
0. 21	·1083
0. 30	·1081
0. 48	·1084
1. 29	·1080
1. 53	·1084
2. 7	·1079
3. 3	·1080
3. 23	·1076
3. 32	·1083
3. 49	·1085
4. 7	·1083
5. 37	·1083
7. 31	·1088
8. 6	·1084

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 9	
h m	
9. 5	·01908
11. 27	·01924
14. 24:	·02102
17. 47	·02500
20. 30	·02805
22. 24	·02900
23. 59	·02880
Aug. 10	
0. 0	·02880
1. 30	·02822
1. 52	·02770
6. 53	·01958
9. 28	·01886
12. 39	·02086
16. 4	·02477
19. 20	·02887
22. 15	·02945
23. 59	·02952

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 9		
h m	°	°
Min.	69 ·7	69 ·5
21. 0	71 ·0	72 ·2
Aug. 10		
1. 0	73 ·8	74 ·6
3. 0	76 ·2	77 ·0
Max.	79 ·0	79 ·7
9. 0	78 ·6	78 ·8
18. 45	71 ·0	72 ·0
Min.	68 ·6	68 ·3
21. 0	70 ·5	71 ·6

Greenwich Mean Solar Time.	Western Declination.
Aug. 10	
h m	° ′ ″
13. 0	20. 44. 10
13. 40	44. 10
15. 23	44. 15
15. 50	43. 10
18. 42	43. 0
19. 24	42. 5
20. 26	43. 0
22. 7	46. 15
23. 27	51. 25
23. 59	51. 55
Aug. 11	
0. 0	20. 51. 55
0. 58	52. 20
2. 9	50. 0
2. 52	48. 10
3. 37	47. 5
4. 16	44. 40
5. 33	44. 40
5. 45	44. 5
8. 59	44. 0
9. 23	42. 25
10. 8	44. 20
11. 37	44. 25
11. 58	44. 50
12. 28	44. 20
13. 57	45. 25
14. 35	46. 20
15. 15	45. 0
15. 46	45. 25
18. 29	41. 10
19. 23	41. 20
20. 13	43. 15
20. 44	43. 0
21. 23	44. 5
22. 15	48. 25
23. 37	51. 20
23. 45	52. 15
23. 59	51. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 10	
h m	
8. 51	·1084
9. 25	·1085
9. 38	·1089
9. 57	·1082
10. 38	·1084
10. 53	·1091
11. 13	·1090
11. 38	·1085
12. 28	·1090
13. 29	·1088
15. 15	·1092
15. 44	·1092
16. 5	·1089
16. 21	·1090
18. 57	·1087
	***
20. 14	·1078
21. 4	·1075
22. 8	·1075
23. 11	·1078
23. 32	·1079
23. 59	·1082
Aug. 11	
0. 0	·1082
0. 44	·1085
1. 8	·1084
1. 50	·1084
2. 35	·1094
2. 59	·1091
3. 28	·1091
3. 54	·1096
4. 38	·1086
5. 26	·1089
5. 41	·1097
5. 51	·1090
6. 0	·1092
6. 8	·1090
6. 37	·1096
7. 1	·1094
8. 0	·1102
8. 15	·1099
8. 33	·1098
8. 48	·1099
9. 5	·1096
9. 30	·1102
9. 58	·1099
14. 29	·1099
14. 44	·1100
15. 9	·1098
16. 39	·1095
16. 58	·1093
19. 2	·1092
20. 37	·1080
21. 40	·1080
22. 46	·1088
23. 4	·1086
23. 36	·1087

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 11	
h m	
0. 0	·02952
1. 27:	·02900
2. 47	·02802
4. 39	·02598
6. 53:	·02317
9. 9	·02227
12. 24	·02344
14. 38:	·02485
17. 2	·02800
18. 55	·03060
	·03038
20. 54	·03068
23. 59	·03123

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 11		
h m	°	°
1. 0	71 ·8	72 ·2
3. 0	73 ·1	73 ·9
Max.	74 ·6	75 ·5
9. 0	74 ·6	75 ·0
18. 0	68 ·0	69 ·0
Min.	64 ·6	64 ·2
21. 0	66 ·0	67 ·0
22. 0	66 ·6	67 ·0
23. 0	66 ·8	67 ·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Aug. 11 h m		h m		h m	°	°
		23. 43	·1090					
		23. 52	·1091					
		23. 59	·1089					
Aug. 12		Aug. 12		Aug. 12		Aug. 12		
0. 0	20. 51. 55	0. 0	·1089	0. 0	·03123	0. 0	67 ·9	68 ·4
0. 40	53. 0	1. 4	·1091	1. 28:	·03048	1. 0	68 ·9	69 ·3
1. 1	52. 50	1. 23	·1096	3. 15	·02800	2. 0	69 ·9	71 ·0
1. 23	53. 30	1. 39	·1094	6. 38	·02118	3. 0	71 ·0	72 ·0
2. 43	50. 0	2. 28	·1097	9. 10	·02030	6. 0	74 ·4	75 ·2
3. 13	49. 40	2. 53	·1097	12. 30	·02200	Max.	75 ·4	76 ·2
4. 15	47. 20	3. 16	·1103	14. 8	·02340	9. 0	74 ·0	75 ·0
6. 18	45. 0	3. 26	·1102	18. 53	·03067	12. 0	72 ·0	73 ·2
8. 5	45. 10	3. 46	·1104	21. 57	·03152	18. 30	67 ·0	68 ·0
8. 40	46. 0	3. 59	·1102		·03135	Min.	64 ·0	63 ·4
9. 22	44. 30	4. 56	·1102	22. 57	·03161	21. 0	65 ·4	66 ·6
13. 3	45. 5	5. 13	·1105	23. 59	·03122	22. 0	66 ·0	67 ·0
14. 30	44. 25	6. 19	·1105			23. 0	66 ·2	67 ·3
14. 55	45. 0		***					
	***	8. 3	·1106					
16. 22	43. 25	8. 24	·1104					
17. 36	44. 0	8. 38	·1106					
18. 26	42. 20	9. 4	·1104					
19. 3	43. 5	9. 37	·1107					
19. 51	41. 0	10. 25	·1106					
20. 25	40. 10	11. 9	·1103					
20. 30	41. 10	11. 38	·1102					
21. 2	41. 50	12. 8	·1105					
21. 57	46. 10	13. 29	·1105					
22. 13	47. 0	13. 38	·1101					
22. 40	50. 0	13. 45	·1103					
23. 20	51. 50	14. 36	·1101					
23. 44	51. 25	15. 4	·1104					
23. 59	51. 35	16. 30	·1102					
		17. 54	·1103					
		18. 57	·1096					
		19. 14	·1097					
		21. 6	·1091					
		21. 28	·1093					
			***					
		22. 16	·1089					
		22. 26	·1091					
		22. 51	·1089					
		23. 13	·1092					
			(†)					
Aug. 13		Aug. 13		Aug. 13		Aug. 13		
0. 0	20. 51. 35		(†)	0. 0	·03122	0. 0	67 ·0	68 ·0
1. 23	52. 5	1. 0	·1097*	1. 42:	·02990	1. 0	68 ·8	69 ·7
2. 30	51. 30	1. 11	·1096	3. 5	·02760	2. 0	70 ·6	71 ·5
3. 33	48. 50	2. 7	·1092	5. 53	·02124	3. 0	72 ·0	73 ·0
3. 47	48. 35	3. 23	·1097	7. 26	·02029	Max.	77 ·0	78 ·0
3. 55	49. 0	3. 45	·1094	9. 40	·01976	9. 0	76 ·1	77 ·0
4. 1	48. 20	3. 58	·1102	12. 58:	·02161	18. 0	69 ·5	70 ·5
5. 33	46. 0	4. 6	·1097	16. 30	·02568	Min.	66 ·3	65 ·8
7. 28	44. 20	4. 42	·1096	16. 51	·02564	21. 0	69 ·0	69 ·1
8. 24	45. 15	5. 7	·1101	19. 2	·02862			
8. 46	44. 25	5. 30	·1099	19. 24	·02924			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 13 h m	° ′ ″	Aug. 13 h m		Aug. 13 h m		h m	°	°
9. 13	20. 46. 10	5. 40	·1103	19. 45	·02900			
9. 43	41. 55	6. 13	·1105	20. 19	·02930			
10. 7	45. 25	6. 30	·1104	20. 57	·02908			
10. 53	43. 0		***		·02819			
11. 11	43. 50	9. 10	·1104	21. 38	·02940			
11. 21	42. 45	9. 33	·1100	23. 59	·03057			
11. 34	43. 20	9. 40	·1094					
11. 45	42. 5	10. 2	·1107					
12. 0	43. 10	10. 25	·1102					
13. 11	40. 55	10. 39	·1102					
13. 27	39. 0	10. 50	·1099					
13. 40	35. 45	11. 12	·1106					
14. 8	43. 5	11. 19	·1100					
14. 34	41. 5	11. 37	·1106					
14. 42	42. 0	11. 47	·1099					
14. 52	41. 25	12. 9	·1100					
15. 46	46. 5	12. 37	·1103					
16. 2	20. 50. 45	13. 2	·1098					
16. 22	21. 0. 35	13. 25	·1098					
16. 49	20. 47. 55	13. 38	·1112					
17. 6	42. 5	13. 43	·1106					
	***	13. 49	·1112					
17. 36	44. 50	14. 1	·1104					
17. 56	44. 0	14. 17	·1110					
18. 8	48. 5	14. 40	·1106					
18. 26	48. 40	14. 54	·1107					
18. 59	44. 15	15. 0	·1105					
19. 17	20. 57. 35	15. 20	·1110					
	***	15. 33	·1107					
19. 28	21. 0. 0	15. 42	·1113					
19. 46	20. 49. 50	15. 55	·1113					
19. 53	51. 5	16. 11	·1104					
20. 1	49. 10	16. 36	·1125					
20. 15	52. 30	16. 55	·1120					
20. 33	46. 25	17. 10	·1128					
20. 37	49. 20	17. 39	·1125					
20. 42	47. 20	17. 48	·1129					
20. 46	50. 5	18. 26	·1114					
20. 58	42. 0	18. 35	·1107					
21. 4	43. 25	18. 45	·1106					
21. 8	42. 5	19. 8	·1081					
21. 30	20. 50. 0	19. 22	·1092					
21. 40	21. 3. 15	19. 43	·1095					
21. 50	20. 55. 55	19. 50	·1090					
21. 57	58. 35	20. 1	·1101					
22. 10	51. 30	20. 18	·1106					
22. 13	53. 10	20. 37	·1086					
	***	20. 41	·1093					
22. 35	50. 55	21. 1	·1056					
22. 45	53. 15	21. 32	·1029					
22. 57	53. 20	21. 41	·1060					
23. 3	56. 35	22. 8	·1042					
23. 14	53. 35	22. 20	·1054					
23. 22	54. 30	22. 25	·1052					
23. 26	53. 35	22. 39	·1063					
	***	23. 0:	·1069					
23. 47	56. 30	23. 21	·1046					
23. 57	54. 35		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 13		Aug. 13						
h m	° ′ ″	h m		h m		h m		
23. 59	20. 57. 0	23. 35	·1052					
			***					
		23. 54	·1080					
		23. 59	·1069					
Aug. 14		Aug. 14		Aug. 14		Aug. 14		
0. 0	20. 57. 0	0. 0	·1069	0. 0	·03057	1. 0	70 ·4	71 ·0
0. 11	58. 20	0. 2	·1069	0. 22	·03036	3. 0	72 ·5	73 ·0
0. 23	55. 15	0. 8	·1085	0. 43	·03048	Max.	74 ·8	75 ·2
0. 32	58. 50	0. 16	·1088	2. 10	·03004	9. 0	74 ·0	75 ·0
0. 38	57. 35	0. 27	·1055	3. 4	·02860	18. 0	67 ·8	69 ·0
0. 42	59. 0	0. 45	·1081	3. 18	·02850	Min.	65 ·2	65 ·0
0. 47	56. 45	0. 49	·1062	5. 50	·02438	21. 0	67 ·0	68 ·0
0. 53	57. 55	0. 59	·1074	6. 15	·02367			
1. 25	57. 20	1. 26	·1045	8. 2	·02180			
1. 33	59. 30	1. 36	·1057	9. 24	·02093			
1. 45	53. 10	1. 45	·1052	9. 45	·02103			
1. 52	54. 45	1. 52	·1071	10. 1	·02085			
2. 0	48. 30	1. 58	·1061	11. 8	·02137			
2. 6	53. 5	2. 9	·1095	11. 32	·02120			
2. 16	51. 25	2. 22	·1079	12. 8	·02200			
2. 32	56. 30	2. 30	·1089	12. 25	·02118			
2. 42	55. 0	2. 43	·1063	12. 43	·02104			
2. 45	53. 5	2. 52	·1063	13. 18	·02233			
2. 51	55. 0	3. 2	·1052	13. 51	·02290			
2. 56	52. 45	3. 20	·1071	14. 12	·02300			
3. 6	51. 40	3. 32	·1059	14. 47	·02344			
3. 15	53. 35	3. 38	·1081	15. 6	·02400			
3. 30	50. 10	3. 51	·1077	15. 45	·02440			
3. 33	52. 10	3. 58	·1093	19. 2	·02980			
3 38	50. 30	4. 1	·1090	21. 25	·03084			
3. 46	50. 5	4. 8	·1101	23. 0	·03144			
3. 52	51. 45	4. 20	·1080	23. 59	·03098			
4. 2	51. 40	4. 35	·1080					
4. 13	48. 35	4. 44	·1091					
4. 31	48. 35	4. 55	·1091					
4. 38	49. 10	5. 2	·1085					
5. 9	48. 0	5. 17	·1099					
5. 13	49. 5	5. 30	·1083					
5. 19	48. 30	5. 45	·1084					
5. 28	46. 15	5. 53	·1108					
5. 37	47. 10	6. 8	·1092					
5. 43	46. 20	6. 28	·1079					
5. 54	48. 0	6. 37	·1078					
6. 2	45. 5	6. 51	·1098					
6. 7	45. 55	7. 4	·1085					
6. 20	43. 40	7. 19	·1097					
6. 28	44. 5	7. 27	·1088					
6. 38	42. 35	7. 35	·1095					
6. 53	42. 45	7. 52	·1084					
7. 1	43. 50	8. 15	·1082					
7. 17	42. 10	8. 25	·1089					
7. 34:	44. 50	8. 45	·1082					
8. 8	39. 25	9. 2	·1085					
8. 27	39. 0	9. 12	·1080					
8. 37	42. 25	9. 38	·1123					
8. 58	34. 40	9. 51	·1088					
9. 7	35. 40	10. 0	·1087					
Aug. 14		Aug. 14						
h m	° ′ ″	h m		h m		h m		
9. 26	20. 29. 5	10. 8	·1080					
9. 45	41. 5	10. 16	·1090					
9. 59	44. 0	10. 26	·1082					
10. 27	40. 25	10. 48	·1076					
10. 37	44. 15	11. 0	·1081					
10. 43	43. 40	11. 25	·1051					
11. 1	41. 0	11. 53	·1064					
11. 8	42. 50	12. 0	·1081					
11. 18	40. 50	12. 9	·1081					
11. 28	35. 50	12. 15	·1073					
11. 34	36. 10	12. 35	·1074					
11. 41	34. 20	12. 52	·1082					
11. 53	35. 25	13. 6	·1076					
12. 2	20. 43. 55	13. 30	·1089					
12. 18	21. 3. 55	13. 36	·1088					
12. 32	20. 57. 10	13. 52	·1100					
12. 54	42. 50	13. 59	·1097					
13. 11	41. 35	14. 23	·1097					
13. 23	43. 45	14. 39	·1081					
		14. 57	·1093					
14. 2	46. 0	15. 17	·1076					
14. 17	41. 50	15. 23	·1076					
14. 46	38. 30	15. 42	·1067					
15. 2	42. 55	15. 47	·1069					
15. 23	40. 0	16. 1	·1058					
15. 38	42. 25	16. 10	·1065					
15. 53	42. 10	16. 23	·1064					
16. 2	45. 30	16. 35	·1074					
16. 7	45. 30	16. 38	·1067					
16. 31	50. 35	16. 51	·1075					
16. 40	48. 40	16. 56	·1064					
16. 51	48. 50	17. 6	·1075					
16. 58	46. 30	17. 22	·1075					
17. 3	45. 10	17. 30	·1071					
17. 8	46. 45	17. 43	·1080					
17. 13	44. 30	18. 3	·1070					
17. 24	46. 10	18. 8	·1072					
17. 45	44. 5	18. 25	·1056					
18. 3	44. 40	18. 48	·1036					
18. 17	43. 40	18. 54	·1040					
18. 23	47. 5	19. 9	·1031					
18. 34	47. 55	19. 33	·1041					
18. 49	52. 25	19. 54	·1066					
19. 6	54. 0	20. 8	·1056					
19. 13	53. 10		***					
19. 17	53. 55	20. 45	·1056					
19. 23	52. 40	20. 47	·1052					
19. 29	53. 10	20. 55	·1059					
19. 45	52. 0	21. 11	·1053					
20. 0	53. 50	21. 30	·1049					
20. 8	53. 0		(†)					
20. 31	46. 35	22. 25	·1057					
20. 39	47. 35	22. 46	·1076					
20. 45	45. 50		***					
21. 36	46. 15	23. 2	·1074					
21. 52	49. 0	23. 14	·1084					
22. 3	48. 35	23. 25	·1065					
22. 17	49. 20	23. 44	·1072					
			(†)					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Aug.14	
h m	° ′ ″
22. 27	20. 47. 5
22. 30	48. 10
22. 45	46. 55
23. 2	46. 45
23. 21	49. 30
23. 30	48. 0
23. 59	50. 0
Aug.15	
0. 0	20. 50. 0
0. 17	49. 55
0. 32	50. 35
0. 52	52. 20
1. 8	52. 50
2. 2	46. 25
2. 24	48. 10
2. 47	48. 5
3. 26	49. 50
3. 58	49. 0
4. 3	48. 10
4. 8	48. 35
4. 23	47. 10
4. 37	46. 35
5. 21	43. 15
5. 31	39. 35
5. 44	37. 0
5. 58	40. 50
6. 11	41. 30
6. 26	44. 5
7. 15	40. 40
7. 31	42. 15
7. 43	39. 40
8. 2	37. 50
8. 22	28. 30
8. 38	38. 10
8. 55	42. 5
	(†)
9. 0	43. 37*
9. 42	45. 10
9. 47	46. 5
10. 30	42. 40
10. 39	44. 50
10. 45	43. 55
10. 56	44. 40
10. 59	44. 10
11. 7	48. 55
11. 28	44. 35
12. 5	43. 45
12. 22	41. 10
12. 49	42. 40
13. 16	45. 0
14. 8	45. 10
14. 42	46. 30
14. 57	45. 5
15. 20	46. 40
15. 32	46. 5
16. 8	46. 40
16. 29	48. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug.15	
h m	
1. 0	·1069*
3. 0	·1070*
9. 0	·1092*
22. 10	·1031*
	(†)
23. 20	·1043
23. 59	·1060

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug.15	
h m	
0. 0	·03098
1. 7	·03054
3. 42	·02677
7. 35	·02395
8. 9	·02408
9. 22	·02330
11. 13	·02343
13. 53	·02544
16. 42	·02893
17. 2	·02861
17. 42	·02885
18. 15	·02957
20. 39	·03047
23. 59	·03110

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.15		
h m	°	°
1. 0	70·2	71·2
3. 0	72·8	74·0
Max.	76·2	77·3
9. 0	76·0	77·3
Min.	67·0	67·0
22. 10	69·0	70·0

Greenwich Mean Solar Time.	Western Declination.
Aug.15	
h m	° ′ ″
16. 45	20. 48. 20
17. 6	49. 30
17. 25	49. 10
	(†)
18. 45	46. 40
19. 11	46. 20
19. 23	47. 50
19. 33	46. 25
20. 7	46. 50
20. 18	44 20
20. 32	45. 0
20. 45	42. 50
20. 59	44. 5
21. 6	43. 10
21. 13	44. 45
21. 26	44. 20
21. 42	47. 35
21. 57	47. 0
22. 12	49. 5
22. 23	48. 15
22. 32	51. 20
22. 47	52. 45
	***
23. 54	52. 45
23. 59	53. 30
Aug.16	
0. 0	20. 53. 30
0. 12	51. 30
0. 22	53. 55
0. 41	51. 5
1. 7	51. 55
1. 9	53. 5
1. 22	52. 5
1. 32	53. 5
1. 44	52. 0
1. 53	54. 25
2. 13	52. 35
2. 27	52. 0
2. 33	53. 50
2. 46	52. 40
3. 0	52. 40
3. 8	53. 45
3. 19	49. 55
3. 30	48. 40
3. 37	46. 35
3. 52	48. 50
4. 11	47. 20
4. 45	47. 0
5. 30	42. 55
5. 46	43. 25
5. 53	44. 30
6. 0	44. 10
6. 12	45. 45
6. 24	45. 0
7. 52	46. 15
8. 31	45. 15
8. 42	46. 25

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug.16	
h m	
0. 0	·1060
0. 15	·1072
0. 23	·1085
0. 47	·1062
0. 52	·1066
1. 10	·1059
1. 16	·1062
1. 25	·1058
1. 37	·1060
1. 50	·1048
1. 58	·1064
2. 6	·1053
2. 11	·1059
2. 18	·1048
2. 41	·1073
2. 55	·1071
3. 4	·1065
3. 14	·1073
3. 21	·1065
3. 32	·1077
3. 38	·1074
3. 47	·1085
4. 2	·1089
4. 16	·1084
4. 43	·1093
5. 8	·1090
	***
6. 28	·1088
6. 55	·1091
7. 8	·1087
7. 28	·1090

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug.16	
h m	
0. 0	·03110
1. 7	·03100
3. 45	·02910
4. 59	·02680
6. 30	·02434
7. 54	·02440
9. 1	·02405
	(†)
21. 0	·03243*
22. 23	·03258
23. 43	·03278
	·03244
23. 59	·03242

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.16		
h m	°	°
Max.	75·0	76·0
9. 43	74·0	75·0
18. 0	68·0	69·0
Min.	65·2	65·0
21. 0	66·8	68·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 15. The photographic trace of the Horizontal Force Magnet was lost.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 16		Aug. 16						
h m	° ′ ″	h m		h m		h m	°	°
8. 56	20. 45. 10	7. 41	·1088					
9. 21	45. 10		***					
9. 43	43. 45	9. 6	·1087					
10. 16	45. 25	9. 21	·1091					
10. 32	44. 10	9. 32	·1087					
10. 57	45. 35	10. 2	·1088					
11. 7	44. 30	10. 11	·1091					
11. 30	41. 55	10. 35	·1089					
11. 56	44. 10	10. 59	·1098					
12. 37	49. 0	11. 16	·1090					
12. 53	48. 5	12. 17	·1090					
13. 7	48. 30	12. 32	·1095					
13. 23	46. 0	12. 40	·1094					
13. 37	46. 10	13. 0	·1096					
14. 17	43. 35	13. 30	·1092					
14. 48	44. 30	13. 53	·1092					
15. 30	48. 30	14. 10	·1084					
15. 49	45. 50	14. 30:	·1083					
16. 31	44. 25	14. 55	·1086					
17. 8	46. 20	15. 53	·1098					
17. 28	48. 40	16. 37	·1081					
17. 37	47. 35	17. 2	·1089					
17. 48	49. 0	18. 3	·1073					
18. 13	48. 0	18. 52	·1092					
18. 33	50. 0	19. 2	·1085					
18. 43	49. 0	19. 15	·1089					
	***	19. 36	·1074					
19. 7	48. 50	19. 55	·1065					
19. 14	46. 20	20. 8	·1070					
19. 28	46. 0	21. 8	·1075					
19. 36	43. 40	21. 45	·1055					
19. 46	44. 55	22. 8	·1067					
20. 0	43. 45	22. 25	·1059					
	**	22. 37	·1070					
20. 34	45. 40	22. 48	·1071					
21. 17	45. 30	23. 3	·1078					
22. 13	48. 10	23. 29	·1068					
22. 26	45. 10	23. 37	·1072					
22. 35	47. 10	23. 47	·1066					
22. 41	46. 35	23. 59	·1072					
23. 2	49. 20							
23. 28	49. 10							
23. 39	51. 10							
23. 47	50. 15							
23. 59	51. 50							
Aug. 17		Aug. 17		Aug. 17		Aug. 17		
0. 0	20. 51. 50	0. 0	·1072	0. 0	·03242	1. 0	68·2	69·2
0. 19	52. 0	0. 17	·1075	0. 30	·03240	3. 0	69·8	70·6
0. 30	53. 5	0. 28	·1083	1. 45	·03150	Max.	71·2	71·3
1. 7	53. 10	0. 53	·1084	2. 0	·03160	9. 0	69·8	71·8
1. 35	51. 5	1. 2	·1082	3. 55	·03000	19. 0	62·2	63·0
1. 48	48. 15	1. 8	·1085	6. 53	·02781	Min.	60·0	59·6
1. 59	50. 10	1. 35	·1071	7. 58	·02743	21. 0	61·8	62·8
2. 13	48. 5	1. 47	·1076	9. 8	·02718			
2. 30	50. 20	2. 4	·1104	11. 43	·02900			
3. 3	48. 30	2. 15	·1090	14. 45	·03243			
3. 33	49. 10	2. 23	·1097	15. 37	·03290			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 17		Aug. 17		Aug. 17				
h m	° ′ ″	h m		h m		h m	°	°
3. 49	20. 47. 35	2. 36	·1097	16. 29	·03362			
4. 8	46. 20	2. 45	·1089	20. 2	·03473			
4. 31	48. 10	3. 0	·1092		·03350			
4. 46	45. 0	3. 7	·1088	21. 38	·03423			
4. 53	45. 50		***	23. 30	·03436			
5. 7	46. 0	3. 36	·1095		·03340			
5. 17	44. 45	3. 49	·1086	23. 59	·03337			
5. 32	45. 25	3. 56	·1090					
5. 45	43. 15	4. 12	·1093					
6. 6	42. 10	4. 19	·1097					
6. 12	43. 40	4. 28	·1097					
6. 23	43. 25	4. 37	·1102					
6. 31	44. 25	4. 43	·1099					
6. 45	41. 40	4. 54	·1104					
7. 12	45. 0	5. 8	·1100					
7. 26	45. 35	5. 22	·1091					
7. 43	43. 45	5. 36	·1101					
7. 54	41. 25	5. 47	·1089					
8. 0	43. 25	6. 2	·1088					
8. 15	42. 20	6. 13	·1093					
8. 23	40. 15	6. 28	·1092					
9. 2	44. 0	6. 38	·1086					
9. 23	40. 15	6. 50	·1097					
9. 43	43. 30	6. 58	·1096					
10. 13	45. 10	7. 6	·1100					
11. 38	40. 40	7. 22	·1100					
11. 57	42. 55	7. 30	·1096					
12. 20	42. 35	7. 45	·1092					
12. 39	46. 30	7. 57	·1101					
12. 55	46. 5	8. 11	·1093					
13. 3	48. 45	8. 24	·1106					
13. 22	49. 40	8. 38	·1108					
13. 40	47. 10	9. 8	·1097					
14. 0	48. 15	9. 26	·1103					
14. 10	47. 0	9. 52	·1095					
14. 21	48. 25	10. 30	·1094					
14. 37	47. 20	10. 57	·1102					
14. 52	48. 15	11. 26	·1093					
15. 47	43. 55	11. 40	·1097					
16. 23	46. 20	12. 8	·1091					
16. 45	45. 30	13. 22	·1095					
16. 59	46. 50	13. 39	·1103					
17. 9	45. 50	13. 58	·1099					
17. 52	45. 25	14. 8	·1103					
18. 5	47. 30	14. 29	·1099					
18. 19	45. 55	14. 45	·1103					
19. 0	46. 0	15. 24	·1097					
19. 14	45. 20	15. 38	·1098					
	***	15. 56	·1094					
19. 24	47. 0		***					
19. 32	45. 35	16. 35	·1101					
19. 48	47. 10	16. 45	·1101					
20. 28	46. 0	17. 17	·1090					
20. 35	44. 15	17. 39	·1092					
21. 18	47. 10	17. 56	·1097					
21. 53	47. 40	18. 46	·1097					
22. 6	46. 30	19. 8	·1081					
22. 34	49. 40	19. 43	·1073					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 17		Aug. 17						
h m	° ′ ″	h m		h m		h m	°	°
23. 42	20. 50. 0	20. 6	·1084					
			***					
23. 57	51. 15							
23. 59	51. 10	21. 13	·1090					
		21. 23	·1088					
		21. 47	·1089					
		22. 14	·1084					
			***					
		23. 6	·1094					
		23. 23	·1091					
		23. 38	·1094					
		23. 46	·1093					
		23. 59	·1092					
Aug. 18		Aug. 18		Aug. 18		Aug. 18		
0. 0	20. 51. 10	0. 0	·1092	0. 0	·03337	1. 0	63 ·0	63 ·8
0. 15	51. 55	0. 10	·1092	2. 58	·03344	3. 0	63 ·6	64 ·4
0. 44	57. 5	0. 23	·1101	3. 55	·03332	6. 0	64 ·6	65 ·1
0. 52	51. 0	0. 34	·1094	5. 33	·03250	Max.	64 ·6	65 ·8
1. 0	50. 30	0. 44	·1096	6. 53	·03260	9. 0	64 ·0	65 ·8
1. 7	52. 0	0. 54	·1088	7. 19	·03270	18. 0	61 ·8	63 ·0
1. 23	52. 30	1. 2	·1086	10. 2	·03225	Min.	59 ·8	59 ·7
1. 53	49. 15	1. 8	·1095	13. 2	·03247	21. 0	61 ·2	61 ·8
	***	1. 20	·1094	17. 4	·03426	22. 0	61 ·3	61 ·8
2. 15	48. 25	1. 26	·1097		·03265	23. 0	61 ·2	61 ·7
	***	1. 37	·1093	18. 52	·03347			
			***					
2. 45	49. 45			20. 7	·03403			
3. 12	49. 25	2. 33	·1110	21. 1	·03418			
3. 35	49. 35	3. 0	·1113		·03325			
4. 0	47. 10	3. 20	·1106	23. 59	·03406			
5. 45	44. 50	3. 47	·1117					
6. 7	44. 45	4. 7	·1101					
			***					
6. 15	43. 45							
6. 30	43. 5	4. 38	·1098					
6. 52	40. 25	4. 53	·1105					
7. 22	43. 25	5. 4	·1101					
7. 59	44. 15	5. 37	·1107					
8. 37	43. 15	5. 43	·1107					
8. 47	41. 50	6. 8	·1118					
9. 13	43. 30	6. 17	·1111					
9. 25	42. 10	6. 23	·1112					
9. 42	44. 30	6. 42	·1101					
10. 0	43. 10	7. 8	·1116					
10. 37	46. 10	7. 22	·1115					
10. 48	45. 5	8. 11	·1119					
11. 14	44. 55	8. 26	·1116					
11. 17	45. 30	9. 0	·1118					
11. 42	44. 0	9. 29	·1122					
11. 59	45. 25	9. 48	·1117					
12. 26	51. 15	10. 7	·1116					
12. 40	50. 5	10. 15	·1120					
12. 59	46. 35		***					
13. 32	44. 30	10. 43	·1113					
13. 58	46. 30	11. 0	·1120					
14. 19	45. 50	11. 10	·1118					
14. 53	43. 5	11. 16	·1121					
15. 8	43. 35	12. 0	·1114					
15. 30	41. 0	12. 11	·1119					
15. 51	42. 40	13. 0	·1121					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 18		Aug. 18						
h m	° ′ ″	h m		h m		h m	°	°
16. 7	20. 40. 50	13. 47	·1111					
16. 25	40. 0	14 18	·1116					
17. 14	44. 10	14. 20	·1114					
17. 28	44. 5	15. 3	·1117					
17. 48	47. 40	15. 15	·1115					
18. 7	46. 15	15. 30	·1118					
18. 22	47. 25	16. 20	·1113					
18. 32	45. 45	16. 40	·1100					
19. 0	44. 35	16. 53	·1098					
19. 19	42. 25	17. 21	·1100					
19. 38	43. 30	17. 38	·1106					
19. 56	46. 5	18. 3	·1104					
20. 9	43. 15	18. 36	·1115					
20. 23	43. 25	19. 2	·1115					
20. 26	42. 0	19. 18	·1108					
20. 32	43. 15	19. 38	·1105					
20. 35	42. 5	20. 8	·1092					
20. 38	43. 5		***					
20. 54	44. 30	21. 3	·1099					
21. 44	45. 5	21. 43	·1097					
22. 36	46. 40	22. 37	·1089					
22. 45	47. 35		***					
22. 53	46. 45	23. 15	·1097					
22. 59	47. 50		(†)					
23. 12	48. 10							
23. 21	49. 5							
	(†)							
Aug. 19		Aug. 19		Aug. 19		Aug. 19		
	(†)		(†)	0. 0	·03406	0. 0	61 ·0	61 ·7
1. 0	20. 50. 25*	0. 15	·1098	1. 8	·03438	1. 0	61 ·2	61 ·9
3. 0	49. 25*	0. 30	·1097	1. 45	·03437	2. 0	62 ·0	62 ·6
5. 16	44. 50	0. 55	·1100		·03330	3. 0	62 ·6	63 ·5
5. 28	43. 50	1. 0	·1104	2. 33	·03313	6. 0	64 ·4	65 ·1
6. 10	42. 40	1. 7	·1105	4. 45	·03216	Max.	64 ·5	65 ·2
6. 26	41. 5	1. 45	·1124	7. 26	·03038	9. 0	64 ·5	65 ·2
6. 38	41. 20	2. 14	·1121	9. 20	·02887	12. 0	62 ·9	64 ·0
7. 0	43. 0	2. 18	·1124	12. 49	·03020	18. 0	61 ·0	62 ·0
7. 22	42. 10	2. 54	·1110	13. 54	·03080	Min.	58 ·8	58 ·4
7. 38	44. 0	3. 7	·1116	14. 16	·03083	21. 0	59 ·9	61 ·0
8. 0	43. 30	4. 0	·1120	17. 46	·03280	22. 0	60 ·0	61 ·0
8. 26	45. 10		(†	21. 6	·03410	23. 0	60 ·7	61 ·1
8. 35	44. 5	9. 0	·1114*	22. 16	·03423			
8. 58	46. 0	21. 0	·1091*		·03261			
9. 16	45. 10			23. 59	·03257			
9. 31	43. 35							
10. 12	45. 5							
10. 28	46. 30							
10. 40	44. 40							
11. 6	44. 25							
11. 25	45. 55							
11. 44	44. 55							
12. 1	45. 35							
12. 17	45. 5							
12. 29	46. 30							
12. 42	45. 20							
13. 13	52. 30							
13. 38	49. 5							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

August 19. The Photographic trace of the Horizontal Force Magnet was lost after $4^h.\ 10^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 19								
h m	° ′ ″	h °		h m		h m	°	°
14. 43	20. 45. 30							
15. 0	43. 35							
16. 0	43. 15							
16. 22	42. 0							
16. 38	43. 5							
16. 50	42. 30							
	(†)							
21. 0	43. 34*							
Aug. 20		Aug. 20		Aug. 20		Aug. 20		
	(†)		(†)	0. 0	·03257	0. 0	61 ·4	61 ·8
0. 9	20. 50. 10	0. 16	·1112	2. 48	·03118	1. 0	61 ·8	62 ·2
0. 27	49. 45	0. 30	·1109	4. 37	·02970	2. 0	62 ·2	63 ·0
0. 45	51. 25	0. 47	·1113	7. 9	·02907	3. 0	63 ·0	64 ·0
1. 27	51. 35	1. 9	·1106	9. 17	·02902	Max.	64 ·2	64 ·6
1. 52	50. 15	1. 34	·1107	13. 22	·02990	9. 0	63 ·6	64 ·6
2. 13	51. 0	1. 43	·1104	13. 40	·02986	18. 0	60 ·2	61 ·2
2. 37	49. 25	2. 5	·1103	18. 24	·03286	Min.	57 ·5	57 ·1
3. 30	47. 10	2. 13	·1106	20. 30	·03487	21. 0	59 ·0	60 ·0
4. 43	46. 30	2. 40	·1102	22. 52	·03600			
5. 23	45. 5	2. 50	·1104	23. 59	·03584			
6. 37	44. 15	2. 56	·1102					
7. 13	45. 0	3. 17	·1106					
7. 51	43. 40	3. 23	·1104					
8. 19	44. 15	3. 37	·1105					
8. 37	45. 15	3. 45	·1108					
9. 38	46. 0		***					
11. 52	46. 10	4. 30	·1114					
12. 43	45. 10	4. 48	·1113					
13. 3	43. 30		***					
13. 17	47. 0	5. 25	·1113					
13. 27	46. 5	6. 5	·1118					
14. 14	44. 30	6. 52	·1112					
14. 44	44. 40	7. 6	·1114					
15. 23	43. 10	7. 30	·1112					
15. 41	43. 55	7. 57	·1113					
15. 50	43. 5	8. 8	·1115					
15. 55	44. 35	8. 49	·1113					
16. 32	42. 50	9. 2	·1116					
17. 34	43. 5	9. 14	·1115					
18. 11	42. 15	9. 39	·1117					
18. 22	43. 50	9. 45	·1120					
19. 2	43. 55	9. 55	·1118					
19. 15	45. 0	10. 29	·1116					
19. 25	44. 40	12. 34	·1118					
19. 45	45. 30	12. 53	·1123					
20. 33	44. 0	13. 9	·1137					
21. 25	46. 25	13. 43	·1115					
21. 37	47. 45	14. 48	·1117					
22. 15	49. 15	15. 35	·1113					
22. 26	48. 25	15. 56	·1116					
22. 37	49. 5		***					
22. 44	51. 0	16. 27	·1115					
23. 5	50. 40	16. 34	·1117					
23. 20	51. 0	17. 30	·1118					
23. 56	48. 50	18. 4	·1114					
23. 59	49. 5	18. 22	·1108					
		18. 33	·1111					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Aug. 20						
h m	° ′ ″	h m		h m		h m	°	°
		18. 56	·1108					
		19. 22	·1114					
		20. 5	·1108					
		20. 20	·1108					
		21. 0	·1099					
		21. 15	·1097					
		21. 49	·1097					
			(†)					
		22. 52	·1082					
		23. 37	·1093					
		23. 45	·1093					
		23. 59	·1097					
Aug. 21		Aug. 21		Aug. 21		Aug. 21		
0. 0	20. 49. 5	0. 0	·1097	0. 0	·03584	1. 0	62 ·4	62 ·2
0. 16	49. 40	0. 13	·1101	1. 30	·03490	3. 0	63 ·8	64 ·0
0. 22	50. 55	0. 22	·1100	3. 38	·03265	Max.	65 ·5	66 ·8
0. 43	51. 45	0. 32	·1105	5. 30	·03062	9. 0	65 ·5	66 ·8
0. 50	52. 50	0. 53	·1106	7. 17	·02867	18. 10	62 ·5	63 ·8
0. 55	51. 50	1. 0	·1103	9. 30	·02795	Min.	60 ·2	60 ·0
1. 0	52. 20	1. 9	·1109	11. 55	·02790	21. 0	61 ·9	63 ·0
1. 34	52. 25	1. 22	·1105	12. 26	·02770			
1. 39	53. 5	1. 42	·1106	15. 45	·02886			
1. 45	52. 5	1. 51	·1101	19. 4	·03080			
2. 6	52. 15	2. 0	·1103	23. 59	·03326			
2. 13	51. 30	2. 15	·1100					
2. 48	51. 0	2. 32	·1102					
3. 0	51. 40	2. 41	·1102					
3. 32	49. 30	2. 51	·1104					
3. 43	49. 40	3. 1	·1113					
5. 22	45. 5	3. 21	·1116					
5. 37	45. 10	3. 34	·1107					
5. 57	43. 30	4. 0	·1106					
6. 32	43. 5	4. 8	·1112					
7. 8	44. 0	4. 19	·1116					
7. 45	43. 45	4. 29	·1112					
9. 33	45. 5	4. 40	·1117					
10. 15	44. 10	5. 24	·1106					
10. 30	45. 5	5. 46	·1111					
11. 4	41. 55	6. 0	·1108					
11. 14	41. 50	6. 7	·1111					
11. 28	39. 25	6. 23	·1112					
11. 43	35. 30	6. 47	·1116					
12. 7	38. 25	7. 14	·1112					
12. 30	35. 0	7. 37	·1115					
12. 43	35. 40	7. 42	·1114					
12. 54	38. 20	7. 56	·1117					
13. 15	40. 20	8. 59	·1112					
13. 42	44. 30	9. 42	·1114					
14. 38	45. 20	10. 8	·1113					
14. 52	44. 5	10. 25	·1117					
15. 16	45. 50	11. 1	·1111					
15. 40	44. 35	11. 11	·1114					
15. 55	46. 30	11. 23	·1110					
16. 35	45. 0	11. 36	·1113					
17. 3	47. 0	11. 54	·1126					
17. 24	45. 45	12. 53	·1110					
17. 39	45. 50		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ; attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 21		Aug. 21						
h m	° ′ ″	h m		h m		h m	°	°
17. 48	20. 46. 55	13. 49	·1106					
18. 1	47. 0	14. 44	·1106					
18. 46	50. 25	14. 54	·1109					
19. 3	51. 10	15. 23	·1108					
19. 40	48. 30	15. 40	·1111					
19. 48	48. 55	15. 52	·1109					
20. 16	46. 55	16. 1	·1113					
20. 28	46. 30	16. 8	·1111					
20. 43	47. 30	16. 18	·1115					
20. 52	46. 5	16. 38	·1114					
21. 23	46. 50	17. 25	·1115					
21. 48	48. 55	17. 59	·1105					
22. 0	48. 30	18. 23	·1102					
22. 11	49. 50	19. 0	·1111					
22. 21	50. 5	19. 8	·1110					
22. 28	49. 25	19. 22	·1116					
22. 58	50. 30	19. 47	·1111					
23. 13	49. 55	19. 57	·1114					
23. 24	51. 25	20. 8	·1108					
23. 33	50. 40	20. 22	·1106					
23. 43	52. 25	20. 37	·1107					
23. 59	50. 15	20. 58	·1100					
		21. 38	·1097					
		22. 8	·1096					
		22. 24	·1077					
		22. 37	·1077					
		22. 55	·1092					
		23. 14	·1084					
		23. 31	·1093					
		23. 38	·1089					
		23. 51	·1092					
		23. 59	·1089					
Aug. 22		Aug. 22		Aug. 22		Aug. 22		
0. 0	20. 50. 15	0. 0	·1089	0. 0	·03326	1. 0	63·4	64·2
0. 40	52. 15	0. 6	·1088	0. 39	·03330	3. 0	65·1	66·1
1. 37	52. 5	0. 47	·1107	1. 23	·03285	Max.	69·5	70·0
1. 43	52. 50	1. 23	·1096	3. 7	·03218	9. 0	69·5	70·0
2. 13	53. 0	1. 40	·1095	3. 55	·03130	Min.	63·5	63·9
2. 23	52. 10	1. 48	·1098	6. 25	·02743	21. 45	65·8	67·0
2. 41	52. 55	1. 58	·1098	8. 17	·02658			
2. 50	54. 0	2. 45	·1114	8. 39	·02657			
3. 6	51. 50	3. 1	·1101	10. 3	·02608			
3. 12	52. 0	3. 14	·1105	13. 20	·02594			
3. 27	49. 20	3. 26	·1096	15. 25	·02630			
3. 38	49. 55	3. 43	·1103	17. 40	·02770			
4. 35	46. 50	4. 40	·1108	20. 27	·02950			
4. 52	47. 0	4. 55	·1112	21. 42	·03020			
5. 2	46. 15	5. 7	·1111	22. 53	·03060			
6. 1	45. 5	5. 17	·1114	23. 59	·03024			
7. 32	44. 40	5. 32	·1112					
8. 8	43. 25	6. 4	·1112					
8. 27	34. 55	6. 20	·1109					
8. 57	40. 20	6. 37	·1110					
9. 7	40. 30	6. 47	·1108					
9. 16	44. 0	7. 6	·1112					
9. 28	43. 55	7. 15	·1110					
9. 45	44. 40	7. 30	·1114					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 22		Aug. 22						
h m	° ′ ″	h m		h m		h m	°	°
10. 3	20. 43. 35	7. 48	·1108					
10. 17	43. 20	7. 55	·1111					
10. 38	43. 50	8. 15	·1099					
11. 40	44. 50	8. 26	·1105					
12. 32	44. 15	9. 1	·1098					
13. 0	45. 25	9. 21	·1097					
13. 24	43. 45	9. 39	·1106					
13. 49	46. 10	10. 14	·1106					
14. 13	44. 50	10. 38	·1103					
14. 38	47. 30	12. 38	·1103					
15. 4	44. 30	13. 8	·1106					
15. 22	46. 15	13. 32	·1105					
15. 56	42. 55	13. 52	·1109					
17. 27	51. 50	14. 19	·1107					
17. 43	51. 35	14. 30	·1110					
18. 1	48. 20	14. 51	·1107					
18. 13	49. 10	15. 28	·1115					
18. 39	47. 35	16. 39	·1102					
18. 54	47. 55	17. 2	·1100					
19. 8	45. 55	17. 38	·1105					
19. 17	45. 55	17. 46	·1101					
19. 38	44. 5	17. 58	·1104					
20. 3	44. 15	18. 20	·1101					
20. 10	45. 0	19. 9	·1111					
20. 33	44. 30	19. 28	·1107					
21. 3	45. 10	19. 37	·1108					
21. 12	44. 0	20. 12	·1102					
21. 33	44. 35	21. 1	·1094					
21. 52	44. 0	21. 38	·1094					
22. 25	46. 30	21. 49	·1098					
22. 45	46. 0	22. 29	·1088					
23. 23	48. 45		(†)					
23. 48	49. 30	23. 29	·1079					
23. 57	49. 5	23. 59	·1078					
23. 59	49. 10							
Aug. 23		Aug. 23		Aug. 23		Aug. 23		
0. 0	20. 49. 10	0. 0	·1078	0. 0	·03024	1. 0	68·0	69·0
0. 25	50. 15	0. 7	·1078	0. 39	·02998	Max.	73·0	74·0
0. 40	49. 40	0. 22	·1081	3. 9	·02760	9. 0	72·6	73·2
1. 0	50. 30	0. 42	·1081	3. 17	·02720	18. 0	68·0	69·7
1. 20	49. 30	1. 5	·1084	3. 26	·02720	Min.	66·0	66·0
1. 40	49. 55	1. 21	·1084	4. 38	·02570	21. 0	67·2	69·0
1. 53	49. 0	1. 42	·1092	6. 59	·02465			
2. 6	49. 25	1. 58	·1091	9. 40	·02424			
2. 32	48. 20	2. 9	·1094	12. 9	·02447			
3. 9	48. 5	2. 30	·1092	12. 50	·02446			
4. 9	46. 15	2. 45	·1093	20. 33	·03005			
4. 22	46. 30	3. 10:	·1103	22. 11	·03068			
5. 0	45. 30	3. 23	·1103	23. 59	·03074			
5. 12	45. 45	3. 40	·1099					
5. 38	44. 10	4. 23	·1107					
6. 48	45. 0	5. 38	·1099					
7. 0	44. 15	5. 49	·1101					
7. 11	44. 50	6. 5	·1100					
7. 34	44. 0	6. 45	·1100					
7. 59	44. 30	7. 2	·1099					
8. 14	43. 35	7. 13	·1100					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 23		Aug. 23						
h m	° ′ ″	h m		h m		h m	°	°
8. 30	20. 44. 30	7. 23	·1098					
8. 39	43. 25	7. 55	·1103					
8. 47	43. 5	8. 8	·1101					
9. 18	44. 15	8. 23	·1101					
9. 37	42. 30	8. 46	·1095					
9. 57	43. 0	9. 0	·1095					
10. 13	42. 0	9. 48	·1102					
10. 30	42. 50	10. 49	·1102					
10. 41	42. 45	11. 13	·1104					
10. 53	43. 40	11. 52	·1110					
11. 24	43. 50	12. 7	·1115					
11. 39	44. 55	12. 23	·1110					
11. 58	41. 15	14. 20	·1093					
12. 13	50. 35	15. 11	·1098					
12. 28	49. 5	15. 25	·1098					
12. 48	42. 30	16. 23	·1102					
13. 13	39. 40	17. 1	·1103					
13. 29	41. 0	17. 30	·1105					
13. 43	39. 50	17. 52	·1102					
14. 0	39. 50	18. 23	·1101					
14. 12	42. 25	18. 55	·1097					
14. 44	46. 0	19. 59	·1100					
14. 52	45. 40	20. 41	·1097					
15. 22	46. 40	21. 13	·1097					
15. 40	45. 15	21. 26	·1094					
16. 0	45. 50	22. 24	·1087					
16. 10	44. 50	23. 2	·1088					
17. 56	44. 5		(†)					
18. 0	45. 0							
18. 8	44. 10							
18. 47	45. 30							
18. 59	43. 15							
20. 0	44. 5							
20. 23	42. 20							
20. 46	42. 5							
22. 42	44. 50							
23. 13	46. 40							
23. 21	48. 0							
23. 59	49. 0							
Aug. 24		Aug. 24		Aug. 24		Aug. 24		
0. 0	20. 49. 0		(†)	0. 0	·03074	1. 0	68 ·5	69 ·7
0. 24	49. 55	0. 25	·1104	0. 57	·03067	3. 0	69 ·1	70 ·0
0. 43	49. 30	1. 4	·1102	2. 54	·02890	Max.	69 ·1	70 ·0
1. 0	50. 0	1. 36	·1100	3. 34	·02890	9. 0	67 ·0	67 ·7
1. 31	49. 5	1. 57	·1103	6. 29:	·02788	18. 0	62 ·2	63 ·4
	***	2. 19	·1108	8. 32	·02905	Min.	60 ·2	60 ·0
2. 22	49. 30	2. 47	·1100	10. 45:	·03210	21. 0	61 ·8	63 ·0
2. 37	48. 30	3. 26	·1115	13. 59	·03367			
	***	3. 50	·1107	16. 15	·03425			
4. 33	45. 10	4. 37	·1107	21. 54	·03517			
	***	4. 53	·1104	23. 59	·03468			
5. 46	44. 25	5. 23	·1111					
6. 17	45. 20	5. 43	·1111					
6. 50	44. 30	6. 0	·1114					
	***	6. 9	·1111					
8. 42	47. 5	6. 37	·1123					
9. 27	46. 25	8. 46	·1123					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 24		Aug. 24						
h m	° ′ ″	h m		h m		h m	°	°
9. 43	20. 47. 5	9. 28	·1127					
9. 57	46. 20	9. 52	·1123					
10. 12	47. 0	10. 7	·1124					
10. 42	46. 20	11. 19	·1124					
11. 41	46. 40	11. 49	·1125					
12. 52	45. 50	12. 0	·1128					
	***	12. 24	·1126					
14. 30	46. 0	13. 7	·1126					
14. 53	46. 35	13. 30	·1124					
15. 34	44. 20	14. 24	·1124					
15. 53	45. 50	14. 50	·1127					
16. 11	45. 20	16. 24	·1125					
16. 22	47. 40	16. 49	·1128					
16. 35	48. 0	17. 18	·1123					
16. 49	46. 45	17. 40	·1123					
17. 5	46. 15	17. 54	·1128					
17. 27	49. 10	18. 34	·1128					
17. 58	51. 30	19. 8	·1140					
18. 22	50. 0	20. 2	·1133					
18. 39	50. 0	20. 30	·1132					
19. 19	44. 5	21. 7	·1121					
20. 0	42. 0	21. 41	·1122					
20. 19	42. 30	21. 58	·1119					
20. 41	42. 25		***					
20. 47	43. 15	22. 29	·1115					
21. 28	45. 10	23. 0	·1117					
21. 32	46. 15		(†)					
21. 45	46. 10	23. 30	·1111					
22. 13	48. 25	23. 47	·1117					
22. 32	48. 30	23. 59	·1118					
22. 56	50. 0							
23. 37	49. 35							
23. 59	51. 50							
Aug. 25		Aug. 25		Aug. 25		Aug. 25		
0. 0	20. 51. 50	0. 0	·1118	0. 0	·03468	1. 0	65 ·3	66 ·2
0. 4	52. 5	0. 8	·1114	2. 17	·03278	3. 0	67 ·3	68 ·5
0. 11	51. 15	0. 52	·1103	4. 45	·02828	Max.	69 ·2	70 ·0
0. 43	51. 30	1. 33	·1110	6. 9	·02659	9. 0	68 ·0	69 ·0
0. 53	50. 30		***	9. 37	·02630	18. 0	62 ·0	63 ·1
1. 38	51. 40	1. 59	·1104	10. 38	·02698	Min.	59 ·5	59 ·2
1. 46	50. 25	2. 10	·1109	10. 57	·02708	21. 0	61 ·0	62 ·0
2. 52	48. 50	2. 20	·1108	13. 42	·02980	22. 0	61 ·6	63 ·0
2. 58	49. 30	3. 15	·1118	18. 15	·03530	23. 0	62 ·0	63 ·0
3. 4	48. 55	3. 21	·1122	20. 59	·03537			
3. 37	49. 15		***	22. 13	·03585			
3. 54	49. 50	3. 54	·1129	23. 59	·03516			
4. 22	48. 50	4. 8	·1128					
4. 44	45. 10	4. 17	·1122					
4. 53	45. 20	4. 23	·1124					
5. 0	44. 35	4. 35	·1110					
5. 11	45. 30	4. 45	·1108					
5. 16	45. 0	5. 13	·1121					
5. 53	46. 40	5. 40	·1119					
6. 3	45. 0	5. 59	·1122					
6. 40	44. 10	6. 8	·1115					
7. 22	45. 25	6. 32	·1114					
8. 0	45. 35	6. 45	·1121					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 25		Aug. 25						
h m	° ′ ″	h m		h m		h m	°	°
8. 7	20. 44. 50	7. 0	·1121					
8. 49	46. 35	7. 11	·1127					
9. 30	38. 40	7. 39	·1124					
9. 41	39. 40	8. 2	·1123					
9. 57	37. 40	8. 14	·1128					
10. 7	39. 25	8. 42	·1126					
10. 15	38. 0	9. 15	·1135					
10. 32	44. 40	9. 47	·1128					
10. 43	45. 45	10. 25	·1140					
11. 4	40. 0	10. 52	·1115					
11. 13	42. 0	11. 11	·1122					
11. 28	41. 5	11. 24	·1118					
12. 23	45. 55	11. 40	·1120					
	***	11. 54	·1118					
15. 51	44. 55	12. 28	·1124					
17. 13	45. 30	13. 19	·1123					
17. 44	44. 40	15. 23	·1127					
17. 53	45. 35	16. 59	·1124					
18. 7	44. 0	17. 6	·1125					
18. 12	45. 20	17. 31	·1124					
18. 18	44. 5	18. 11	·1129					
18. 23	45. 50	18. 58	·1129					
18. 30	44. 30	19. 12	·1126					
19. 0	44. 35	19. 22	·1129					
19. 13	41. 25	19. 51	·1129					
19. 26	45. 40	20. 30	·1122					
20. 2	43. 55	20. 41	·1124					
20. 18	44. 35	20. 59	·1119					
20. 30	43. 35	21. 8	·1111					
20. 38	44. 0	21. 28	·1111					
20. 45	45. 35	22. 4	·1107					
20. 59	44. 0		***					
21. 46	49. 25	22. 52	·1113					
21. 57	49. 0	23. 9	·1121					
22. 18	50. 0	23. 33	·1122					
22. 28	49. 10	23. 37	·1120					
22. 42	49. 35	23. 59	·1125					
22. 51	48. 55							
23. 47	50. 25							
23. 59	51. 45							
Aug. 26		Aug. 26		Aug. 26		Aug. 26		
0. 0	20. 51. 45	0. 0	·1125	0. 0	·03516	0. 0	63·1	64·0
0. 7	51. 5	0. 32	·1125	1. 2	·03480	1. 0	63·1	64·7
0. 24	51. 10	0. 53	·1123	1. 30	·03443	2. 0	64·0	65·7
0. 41	52. 30	1. 3	·1133	3. 0	·03405	3. 0	64·4	65·7
0. 53	51. 45	1. 9	·1128	3. 26	·03363	6. 0	65·1	66·0
1. 1	54. 5	1. 23	·1130	3. 52	·03357	Max.	65·1	66·0
1. 8	53. 15	1. 41	·1111	4. 40	·03305	9. 0	65·0	66·0
1. 22	53. 50	1. 51	·1120	6. 32	·03240	12. 0	65·0	66·0
1. 32	51. 30	2. 6	·1122	9. 22	·03195	18. 0	64·9	66·2
1. 43	51. 15	2. 30	·1149	10. 1	·03128	Min.	62·9	62·8
1. 45	52. 25	2. 41	·1139	10. 59	·03120	21. 0	64·4	66·0
2. 0	52. 5	2. 52	·1137	11. 29	·03167	22. 0	64·8	65·9
2. 8	53. 30	3. 2	·1147	13. 24	·03176	23. 0	65·2	66·1
2. 15	53. 0	3. 32	·1092	13. 52	·03127			
2. 23	55. 20	3. 40	·1097	14. 14	·03136			
2. 37	53. 0	3. 47	·1097	15. 25	·03122			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 26		Aug. 26		Aug. 26				
h m	° ′ ″	h m		h m		h m	°	°
2. 47	20. 52. 55	3. 57	·1111	17. 34	·03180			
2. 57	54. 0	4. 18	·1122	23. 40	·03225			
3. 1	53. 10	4. 40	·1116		·02953			
3. 13	52. 5	5. 7	·1124	23. 59	·02950			
3. 22	50. 25	5. 15	·1119					
3. 32	49. 10	5. 52	·1131					
3. 49	46. 10	6. 21	·1131					
3. 55	46. 0	6. 34	·1115					
4. 15	48. 25	7. 4	·1124					
4. 23	48. 55	7. 38	·1121					
4. 36	47. 40	7. 49	·1122					
4. 44	48. 40	8. 9	·1118					
4. 55	48. 0	8. 30	·1123					
5. 0	48. 30	9. 3	·1119					
5. 17	46. 40	9. 19	·1122					
5. 49	46. 45	9. 47	·1153					
6. 0	45. 15	10. 4	·1123					
6. 20	44. 50	10. 15	·1129					
6. 42	41. 10	10. 30	·1121					
7. 15:	44. 0	10. 38	·1117					
7. 52	44. 35	11. 0	·1088					
8. 13	44. 20	11. 24	·1105					
8. 24	44. 50	11. 52	·1108					
8. 36	44. 10	12. 6	·1106					
8. 48	44. 20	12. 13	·1108					
9. 6	41. 50	12. 41	·1110					
9. 22	43. 0	12. 59	·1106					
9. 42	40. 50	13. 15	·1106					
9. 52	48. 50	13. 32	·1126					
10. 10	42. 30	13. 55	·1106					
10. 21	46. 5	14. 13	·1117					
10. 29	46. 0	15. 0	·1126					
10. 42	47. 20	15. 38	·1117					
11. 9	37. 30	15. 58	·1116					
11. 19	38. 20	16. 15	·1108					
11. 29	40. 45	16. 29	·1108					
11. 48	42. 0	17. 0	·1097					
12. 5	42. 5	17. 23	·1103					
12. 9	42. 40	18. 9	·1106					
12. 43	40. 20	19. 38	·1103					
13. 7	49. 15		***					
13. 14	51. 15	21. 5	·1093					
13. 26	55. 55	21. 17	·1093					
13. 55	47. 0	21. 28	·1088					
14. 21	46. 15	21. 53	·1084					
14. 43	46. 0	22. 10	·1085					
15. 1	44. 0	22. 29	·1090					
15. 52:	38. 30	22. 59	·1092					
	***	23. 9	·1086					
16. 57	42. 10	23. 53	·1090					
17. 30	43. 0	23. 59	·1092					
	***							
18. 52	41. 10							
	***							
20. 15	42. 20							
20. 26	43. 40							
20. 37	43. 15							
20. 45	44. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug.26								
h m	° ′ ″	h m		h m		h m	°	°
21. 0	20. 43. 40							
21. 43	47. 30							
21. 58	48. 10							
22. 41:	52. 15							
23. 0	49. 20							
23. 21	53. 25							
23. 33	54. 0							
23. 59	53. 0							
Aug.27		Aug.27		Aug.27		Aug.27		
0. 0	20. 53. 0	0. 0	·1092	0. 0	·02950	0. 0	65 ·8	66 ·7
0. 41	52. 40	1. 8	·1114	1. 17	·02887	1. 0	66 ·5	67 ·1
1. 26	54. 25	1. 30	·1114	2. 33	·02770	2. 0	67 ·1	68 ·1
1. 37	54. 10	1. 40	·1105	5. 53	·02630	3. 0	67 ·9	68 ·9
1. 59	54. 30	1. 50	·1107	9. 13	·02576	Max.	69 ·0	69 ·8
3. 52	47. 30	2. 23	·1106	10. 13	·02592	9. 0	69 ·0	69 ·0
5. 19	44. 0	2. 42	·1101	10. 39	·02587	18. 0	64 ·4	63 ·7
5. 52	43. 35	2. 50	·1105	10. 59	·02600	Min.	61 ·5	61 ·1
7. 30	45. 10	3. 35	·1105	11. 57	·02576	21. 0	63 ·0	64 ·8
8. 14	44. 50	3. 47	·1107	17. 3:	·02912			
8. 51	45. 45	3. 55	·1105	20. 10	·03244			
9. 9	42. 30	4. 8	·1104	21. 14	·03320			
9. 15	43. 35	4. 13	·1107	22. 45	·03338			
9. 28	41. 25	4. 38	·1107		·03195			
10. 10	39. 25	4. 50	·1110	23. 59	·03162			
10. 15	39. 50	5. 13	·1108					
10. 43	35. 0	5. 32	·1111					
11. 7	43. 50	5. 52	·1104					
11. 18	42. 35		***					
11. 27	43. 20	7. 54	·1111					
11. 39	42. 30	8. 31	·1110					
11. 43	43. 0	9. 2	·1118					
11. 58	39. 40	9. 29	·1114					
12. 11	38. 20	9. 39	·1117					
12. 22	38. 0	9. 56	·1108					
13. 56	44. 35	10. 12	·1119					
	***	10. 50	·1110					
16. 18	46. 5	11. 24	·1119					
	***	11. 33	·1108					
18. 22	43. 30	11. 43	·1114					
18. 27	44. 15	11. 54	·1104					
19. 40	41. 30	12. 8	·1102					
	***	12. 15	·1112					
21. 18	43. 0	12. 23	·1110					
22. 45	51. 45	12. 32	·1114					
22. 50	51. 0	12. 45	·1110					
22. 59	54. 30	13. 21	·1107					
23. 7	52. 0	15. 28	·1115					
	***		***					
23. 30	51. 30	16. 54	·1114					
23. 51	55. 50	18. 17	·1108					
23. 59	56. 25	19. 39	·1101					
		21. 9	·1094					
		21. 38	·1108					
		22. 2	·1109					
		22. 13	·1111					
		22. 32	·1101					
		22. 54	·1110					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Aug.27						
h m	° ′ ″	h m		h m		h m	°	°
		23. 15	·1101					
		23. 28	·1103					
		23. 37	·1099					
		23. 42	·1103					
		23. 49	·1100					
		23. 59	·1118					
Aug.28		Aug.28		Aug.28		Aug.28		
0. 0	20. 56. 25	0. 0	·1118	0. 0	·03162	1. 0	66 ·9	67 ·1
0. 16	57. 20	0. 22	·1111	0. 26	·03137	3. 0	69 ·0	69 ·7
0. 27	56. 30	0. 34	·1101	0. 38	·03137	Max.	71 ·8	73 ·0
0. 38	58. 25	0. 44	·1115	2. 8	·02980	9. 0	71 ·8	73 ·0
0. 53	58. 0	0. 57	·1105	3. 20	·02760	19. 0	65 ·4	66 ·4
1. 0	59. 5	1. 5	·1111	3. 34	·02740	Min.	62 ·7	62 ·2
1. 6	57. 50	1. 9	·1102	4. 10	·02627	21. 0	64 ·4	65 ·8
1. 22	59. 20	1. 28	·1099	4. 53	·02620			
1. 37	56. 25	1. 39	·1076	5. 12	·02595			
1. 56	55. 25	1. 57	·1080	5. 58	·02590			
2. 7	57. 55	2. 12	·1106	6. 28	·02550			
2. 22	55. 30	2. 32	·1098	7. 40	·02500			
2. 33	56. 30	2. 47	·1106	8. 50	·02397			
3. 2	52. 25	3. 6	·1098	9. 13	·02385			
3. 20	52. 0	3. 21	·1098	9. 30	·02405			
3. 25	54. 15	3. 32	·1122	10. 23	·02420			
3. 38	51. 10	3. 51	·1095	11. 22	·02470			
4. 11	49. 30	4. 8	·1094	12. 25	·02465			
4. 27	50. 35	4. 23	·1110	13. 30	·02507			
4. 32	49. 50	4. 32	·1109	15. 40	·02665			
4. 38	51. 40	4. 39	·1125	18. 49	·03067			
4. 46	49. 25	4. 54	·1100	20. 6	·03240			
4. 56	49. 0	5. 22	·1084	21. 24	·03356			
5. 0	47. 0	5. 47	·1117	23. 59	·03378			
5. 6	46. 55	6. 1	·1101					
5. 21	41. 0	6. 12	·1112					
5. 36	35. 0	6. 19	·1106					
6. 0	44. 0	6. 25	·1110					
6. 10	42. 55	6. 38	·1107					
6. 24	42. 40	6. 58	·1108					
6. 36	44. 5	7. 8	·1105					
6. 47	44. 0	7. 22	·1117					
6. 57	44. 35	7. 38	·1105					
7. 12	43. 15	7. 46	·1118					
7. 16	43. 45	7. 59	·1111					
7. 25	42. 30	8. 10	·1121					
7. 31	43. 35	8. 52	·1085					
7. 45	44. 0	9. 8	·1100					
7. 54	41. 25	9. 23	·1097					
8. 6	47. 40	9. 37	·1107					
8. 16	42. 5	9. 45	·1108					
8. 22	43. 0	10. 8	·1094					
8. 32	41. 25	10. 29	·1090					
8. 48	44. 25	10. 37	·1097					
8. 57	43. 10	10. 50	·1100					
9. 2	44. 25	11. 8	·1112					
9. 17	39. 20	11. 23	·1101					
9. 37	41. 50	11. 35	·1109					
9. 47	38. 15	12. 17	·1102					
10. 14	35. 55	12. 24	·1106					
	(†)							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ; attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Aug. 28	
h m	° ′ ″
10. 50	20. 40. 0
11. 0	40. 55
11. 30	49. 0
11. 46	46. 10
11. 59	47. 5
12. 21	44. 20
12. 25	44. 50
12. 29	41. 35
12. 49	47. 15
12. 57	46. 45
13. 20	48. 55
13. 29	46. 30
13. 41	48. 55
14. 13	49. 10
14. 23	48. 5
14. 37	48. 0
14. 54	44. 30
15. 10	45. 5
15. 37	40. 35
16. 0	43. 30
16. 13	46. 5
16. 22	45. 10
16. 37	46. 20
16. 53	44. 50
17. 4	45. 30
17. 18	43. 5
17. 28	43. 30
17. 57	40. 40
	***
18. 17	43. 5
18. 31	45. 40
18. 45	42. 0
18. 58	44. 25
19. 13	41. 50
19. 22	40. 40
19. 36	44. 55
19. 42	43. 40
19. 45	44. 45
20. 1	41. 55
	***
20. 15	42. 50
20. 27	46. 5
20. 41	46. 40
20. 47	45. 25
20. 57	46. 30
21. 0	45. 20
21. 33	49. 40
21. 40	49. 5
22. 6	52. 20
22. 17	51. 10
22. 48	52. 45
23. 0	52. 0
23. 12	54. 45
23. 39	57. 0
23. 52	55. 20
23. 59	59. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 28	
h m	
12. 38	·1105
12. 46	·1112
13. 0	·1112
13. 13	·1101
13. 17	·1103
13. 30	·1090
13. 42	·1090
13. 52	·1093
14. 6	·1090
14. 23	·1098
14. 39	·1097
14. 51	·1102
15. 9	·1106
15. 18	·1095
15. 28	·1090
15. 38	·1094
15. 46	·1085
15. 57	·1086
16. 9	·1083
16. 41	·1091
17. 4	·1092
17. 9	·1094
17. 37	·1093
18. 7	·1100
18. 14	·1097
18. 20	·1098
18. 54	·1064
19. 7	·1073
19. 24	·1072
20. 23	·1081
21. 23	·1077
	(†)
23. 8	·1057
23. 20	·1071
23. 41	·1077
23. 59	·1086

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
Aug. 29	
h m	° ′ ″
0. 0	20. 59. 55
0. 21	54. 0
0. 25	54. 30
0. 30	52. 55
0. 46	55. 0
0. 57	58. 10
1. 37	57. 40
1. 50	58. 10
2. 0	53. 0
2. 12	52. 35
2. 22	20. 53. 10
2. 37	21. 0. 0
2. 47	20. 56. 40
2. 55	55. 55
3. 4	49. 15
3. 15	51. 5
3. 23	47. 30
3. 39	52. 40
3. 49	53. 45
3. 58	51. 0
4. 8	46. 50
4. 13	48. 25
4. 20	48. 30
4. 36	52. 15
4. 58	45. 25
5. 7	35. 55
5. 10	35. 45
5. 16	30. 0
5. 23	33. 50
5. 28	34. 0
5. 41	42. 5
5. 48	44. 5
5. 53	43. 0
6. 14	36. 40
6. 18	37. 0
6. 27	39. 25
6. 43	41. 30
7. 1	42. 30
7. 15.	44. 35
7. 31	43. 10
7. 44	44. 10
8. 3	43. 0
8. 15	34. 20
8. 27	43. 30
9. 0	45. 55
9. 5	44. 35
9. 16	43. 30
9. 27	41. 35
9. 39	44. 15
10. 26	42. 10
11. 19	45. 30
11. 55	45. 40
12. 21	49. 0
12. 33	46. 30
13. 6	47. 50
14. 18	44. 5
14. 38	45. 30
14. 58	43. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 29	
h m	
0. 0	·1086
0. 7	·1098
0. 42	·1065
1. 8	·1091
1. 32	·1073
2. 3	·1091
2. 10	·1108
2. 22	·1102
2. 37	·1118
3. 2	·1071
3. 15	·1094
3. 23	·1093
3. 35	·1106
3. 40	·1104
3. 48	·1107
3. 54	·1106
4. 8	·1093
4. 20	·1109
4. 26	·1106
4. 41	·1115
5. 8	·1083
5. 29	·1142
5. 40	·1145
6. 9	·1094
6. 30	·1105
6. 49	·1096
7. 5	·1100
7. 26	·1092
7. 52	·1104
8. 8	·1097
8. 20	·1120
8. 31	·1106
8. 38	·1115
8. 53	·1115
9. 16	·1093
9. 27	·1103
9. 42	·1104
10. 14	·1094
10. 31	·1099
11. 6	·1098
11. 26	·1105
11. 47	·1106
12. 20	·1097
12. 53	·1105
13. 48	·1099
15. 8	·1101
15. 12	·1098
15. 20	·1100
15. 30	·1098
16. 46	·1099
	***
17. 54	·1096
18. 17	·1098
18. 30	·1094
18. 55	·1095
19. 47	·1091
20. 18	·1092
20. 46	·1089

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 29	
h m	
0. 0	·03378
0. 33	·03343
0. 57	·03343
1. 29	·03290
2. 16	·03240
3. 7	·03050
4. 12	·02848
5. 7	·02705
5. 30	·02690
6. 8	·02533
8. 16	·02447
9. 12	·02365
12. 27	·02532
13. 30	·02637
15. 6	·02850
18. 56	·03388
22. 40	·03471
23. 59	·03438

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 29		
h m	°	°
1. 0	67 ·0	68 ·3
3. 0	68 ·9	70 ·0
Max.	71 ·3	72 ·1
9. 0	71 ·0	72 ·1
Min.	61 ·5	61 ·0
22. 40	63 ·5	65 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Aug.29		Aug.29						
h m	° ′ ″	h m		h m		h m	°	°
15. 11	20. 45. 35	21. 18	·1091					
15. 44	43. 35	21. 47	·1090					
16. 24	45. 25	22. 8	·1094					
16. 45	43. 55	22. 49	·1083					
17. 8	43. 10		(†)					
17. 30	43. 30	23. 47	·1086					
17. 38	42. 55	23. 59	·1090					
17. 43	43. 25							
17. 51	42. 5							
17. 57	43. 5							
18. 0	42. 10							
18. 2	43. 15							
18. 19	41. 55							
18. 25	42. 40							
18. 31	45. 0							
18. 56	42. 20							
19. 24	43. 20							
19. 43	42. 35							
20. 21	42. 25							
20. 30	41. 30							
20. 57	43. 10							
21. 18	43. 40							
22. 56	49. 45							
23. 42	53. 10							
23. 51	52. 55							
23. 55	54. 5							
23. 59	53. 35							
Aug.30		Aug.30		Aug.30		Aug.30		
0. 0	20. 53. 35	0. 0	·1090	0. 0	·03438	0. 30	65 ·8	66 ·8
0. 7	53. 0	0. 22	·1097	2. 7:	·03250	Max.	72 ·0	72 ·8
0. 38	54. 40	1. 25	·1100	4. 17	·02807	8. 0	71 ·7	72 ·7
0. 46	54. 40	2. 45	·1104	5. 50	·02496	18. 0	66 ·4	67 ·0
1. 4	54. 45	4. 19	·1102	8. 54	·02420	Min.	63 ·6	63 ·2
1. 28	53. 35	4. 56	·1107	12. 18:	·02505	21. 0	65 ·0	66 ·0
1. 36	55. 5	5. 23	·1099	17. 32	·02863			
1. 41	53. 20	5. 46	·1099	20. 47	·03167			
1. 49	52. 45	6. 6	·1096	22. 46	·03310			
3. 0	49. 40	6. 37	·1101	23. 59	·03340			
3. 40	48. 35	7. 19	·1102					
6. 28:	43. 30	7. 37	·1099					
8. 40	44. 10	8. 9	·1099					
8. 53	42. 55	8. 17	·1102					
8. 58	43. 0	8. 59	·1098					
9. 14	38. 10	9. 14	·1109					
9. 43	41. 30	9. 38	·1098					
9. 46	41. 25	10. 0	·1101					
10. 18	44. 5	10. 38	·1097					
10. 53	43. 20	10. 53	·1101					
11. 12	44. 5	11. 8	·1095					
	(†)	11. 25	·1098					
12. 0	44. 35	11. 45	·1098					
12. 17	46. 5	12. 8	·1101					
13. 42	43. 55	14. 54	·1101					
13. 53	44. 30	19. 5	·1098					
17. 23	43. 50	20. 22	·1093					
19. 5	42. 40	20. 58	·1081					
19. 42	40. 50	21. 14	·1080					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Aug.30		Aug.30						
h m	° ′ ″	h m		h m		h m	°	°
19. 53	20. 41. 30	21. 30	·1071					
20. 0	41. 5	22. 10	·1079					
20. 9	41. 40		(†)					
20. 24	41. 40	23. 34	·1090					
20. 37	43. 10	23. 37	·1099					
20. 51	43. 55	23. 51	·1104					
21. 8	45. 35	23. 59	·1102					
21. 27	45. 15							
21. 52	47. 50							
22. 0	47. 25							
22. 18	49. 40							
22. 24	48. 20							
23. 2	51. 45							
23. 18	51. 40							
23. 36	54. 15							
23. 43	52. 40							
23. 57	51. 10							
23. 59	51. 25							
Aug.31		Aug.31		Aug.31		Aug.31		
0. 0	20. 51. 25	0. 0	·1102	0. 0	·03340	1. 0	66 ·4	67 ·0
0. 33	53. 15		(†)	0. 58	·03332	3. 0	67 ·0	68 ·0
0. 44	52. 0	1. 0	·1103*	1. 30	·03310	Max.	67 ·2	68 ·0
0. 49	53. 0	1. 24	·1108		(†)	9. 0	66 ·6	68 ·0
0. 56	52. 15	1. 42	·1100	3. 0	·03247*	18. 15	60 ·0	61 ·8
1. 23	54. 0	2. 2	·1104	3. 28	·03240	Min.	57 ·1	56 ·8
1. 40	51. 5	2. 24	·1101	7. 39	·03050	21. 0	59 ·0	60 ·2
1. 59	51. 25	3. 11	·1102	9. 58	·03058			
2. 31	48. 30	3. 38	·1105	12. 23	·03178			
3. 1	48. 25	3. 53	·1103	13. 38	·03270			
3. 58	45. 40	4. 22	·1104	14. 43	·03402			
5. 7	44. 0	4. 53	·1101	14. 55	·03390			
6. 5	44. 25	5. 27	·1102	21. 49	·03628			
6. 19	45. 5	5. 38	·1106	23. 59	·03630			
6. 47	43. 40	5. 52	·1104					
7. 58	45. 30	6. 30	·1110					
8. 32	45. 5	6. 52	·1103					
8. 40	45. 30	7. 28	·1108					
9. 10	43. 15	8. 5	·1106					
9. 23	37. 55	8. 25	·1113					
9. 38	42. 0	9. 3	·1113					
10. 5	44. 5	9. 26	·1125					
10. 27	43. 30	9. 50	·1110					
11. 11	45. 30	10. 14	·1101					
11. 45	43. 50	10. 40	·1103					
12. 10	45. 30	11. 5	·1106					
12. 30	44. 25	11. 51	·1105					
	***	12. 8	·1107					
14. 31	45. 0	12. 18	·1105					
15. 22	43. 55		***					
15. 56	45. 30	15. 11	·1112					
16. 10	44. 25	15. 25	·1109					
16. 19	45. 25	16. 49	·1111					
16. 53	43. 35		***					
17. 23	44. 5	18. 40	·1108					
18. 17	43. 20	20. 41	·1098					
19. 23	43. 50	21. 30	·1097					
20. 23	43. 5	22. 14	·1098					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 31		Aug. 31						
h m	° ′ ″	h m		h m		h m	°	°
20. 29	20. 44. 0	22. 28	·1102					
20. 52	43. 5	22. 37	·1100					
22. 10	46. 25		(†)					
22. 30	49. 10	23. 38	·1096					
22. 37	49. 50	23. 59	·1100					
23. 35	50. 55							
23. 52	50. 40							
23. 59	51. 10							
Sept. 1		Sept. 1		Sept. 1		Sept. 1		
0. 0	20. 51. 10	0. 0	·1100	0. 0	·03630	1. 0	61 ·7	62 ·4
0. 7	51. 35	1. 43	·1116	2. 17:	·03518	3. 0	63 ·6	64 ·9
0. 58	52. 0	2. 16	·1116	5. 21	·03046	Max.	66 ·2	67 ·0
1. 58	50. 30	2. 41	·1125	6. 40	·02842	9. 0	66 ·0	67 ·0
2. 7	49. 40	2. 50	·1121	8. 8	·02702	18. 0	62 ·0	63 ·0
2. 20	49. 30	3. 6	·1120	11. 43	·02698	Min.	60 ·0	59 ·6
2. 30	50. 25	3. 18	·1121	13. 2	·02736	21. 0	61 ·0	62 ·0
2. 39	49. 20	3. 37	·1116	18. 20	·03125	22. 0	61 ·0	62 ·0
2. 53	48. 30	3. 50	·1118		(†)	23. 0	61 ·6	62 ·5
3. 7	48. 55	4. 20	·1109	21. 0	·03322*			
3. 19	47. 55	4. 32	·1112	23. 38	·03363			
3. 39	48. 0	5. 9	·1108	23. 59	·03363			
3. 56	47. 20	5. 40	·1113					
4. 11	46. 5	5. 57	·1110					
5. 13	39. 55	6. 22	·1117					
5. 28	45. 45	6. 39	·1114					
5. 45	44. 30	6. 59	·1117					
6. 1	44. 55	7. 17	·1113					
6. 8	45. 25	8. 9	·1116					
6. 26	44. 40	8. 30	·1103					
7. 6	44. 55	9. 10	·1110					
7. 11	44. 20	9. 22	·1114					
8. 2	44. 5	9. 45	·1106					
8. 38	39. 35		(†)					
9. 6	43. 10	11. 15	·1118					
9. 13	42. 15	11. 28	·1123					
9. 19	43. 0	11. 53	·1114					
9. 26	42. 15	12. 17	·1124					
9. 31	42. 40	12. 50	·1121					
9. 42	42. 15	13. 0	·1116					
9. 52	43. 5	14. 19	·1107					
10. 15	44. 0	14. 57	·1110					
10. 22	43. 30	15. 10	·1110					
10. 29	44. 5	15. 34	·1114					
10. 55	43. 45	16. 5	·1114					
11. 7	44. 25	16. 54	·1107					
11. 18	42. 55	17. 37	·1109					
12. 15	41. 30	18. 4	·1106					
12. 34	44. 40	18. 36	·1103					
12. 53	43. 0	18. 45	·1105					
13. 29	41. 55	19. 9	·1104					
13. 41	43. 30	20. 6	·1095					
14. 21	41. 55	20. 30	·1093					
14. 42	43. 50	20. 38	·1096					
15. 28	43. 15	20. 45	·1094					
15. 43	44. 20	21. 8	·1095					
16. 8	43. 30	21. 30	·1098					
16. 29	44. 15	22. 4	·1098					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 1		Sept. 1						
h m	° ′ ″	h m		h m		h m	°	°
17. 0	20. 43. 35	23. 0	·1103					
17. 36	44. 0		(†)					
17. 48	43. 0	23. 43	·1103					
17. 54	44. 0	23. 59	·1105					
18. 7	43. 20							
18. 17	43. 40							
18. 28	42. 35							
18. 32	43. 0							
18. 43	41. 10							
18. 51	42. 55							
18. 57	41. 20							
19. 2	42. 30							
19. 7	42. 0							
19. 13	43. 0							
19. 27	42. 15							
19. 34	43. 30							
19. 43	42. 45							
19. 57	42. 50							
20. 1	42. 15							
20. 8	43. 35							
20. 31	44. 0							
20. 40	45. 5							
20. 47	44. 0							
20. 52	44. 40							
21. 6	44. 10							
21. 30	44. 35							
22. 20	47. 0							
23. 59	51. 35							
Sept. 2		Sept. 2		Sept. 2		Sept. 2		
0. 0	20. 51. 35	0. 0	·1105	0. 0	·03363	0. 0	62 ·0	63 ·0
0. 41	53. 0	0. 22	·1108	1. 59	·03342	1. 0	62 ·4	63 ·3
1. 5	51. 55	0. 37	·1108	3. 46	·03262	2. 0	63 ·0	64 ·0
1. 23	52. 0	0. 47	·1111	5. 20	·03196	3. 0	63 ·0	64 ·2
1. 43	50. 55	1. 12	·1105	5. 40	·03190	6. 0	64 ·3	65 ·0
1. 58	51. 5	2. 8	·1109	8. 6:	·03135	Max.	64 ·3	65 ·0
2. 13	49. 50	2. 20	·1105	10. 24	·03138	9. 0	63 ·7	64 ·9
2. 24	50. 0	2. 34	·1110	13. 39	·03230	12. 0	63 ·0	64 ·0
2. 53	48. 25	2. 57	·1106	17. 43:	·03430	18. 10	61 ·9	63 ·0
3. 8	49. 5	3. 10	·1110	20. 13	·03512	Min.	60 ·1	59 ·9
3. 45	47. 0	3. 54	·1107	21. 50	·03500	21. 0	61 ·8	62 ·1
4. 24	47. 15	4. 20	·1116	23. 59	·03405	22. 0	62 ·7	63 ·1
4. 58	46. 10	4. 37	·1115			23. 0	63 ·3	63 ·6
5. 16	42. 0	4. 49	·1118					
5. 38	44. 10	5. 4	·1114					
6. 22	43. 30	5. 8	·1116					
6. 58	45. 20	5. 19	·1106					
7. 23	44. 55	5. 41	·1112					
7. 59	42. 0	5. 51	·1107					
8. 35	44. 10	6. 24	·1103					
8. 50	45. 0	6. 44	·1111					
9. 1	43. 10	6. 53	·1110					
9. 33	44. 0	7. 12	·1114					
9. 53	39. 45	7. 44	·1111					
10. 5	41. 55	8. 8	·1114					
10. 17	41. 35	8. 22	·1112					
10. 37	44. 0	8. 53	·1114					
11. 2	43. 25	9. 27	·1122					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 2		Sept. 2						
h m	° ′ ″	h m		h m		h m	°	°
11. 14	20. 44. 5	9. 38	·1120					
11. 38	42. 25	10. 6	·1128					
11. 45	42. 45	10. 23	·1117					
11. 55	42. 15	10. 58	·1111					
12. 16	43. 15	11. 13	·1113					
13. 8	45. 10	11. 39	·1109					
13. 15	46. 5	12. 36	·1107					
13. 29	46. 0	13. 22	·1113					
13. 43	44. 25	13. 38	·1116					
14. 9	43. 30	14. 38	·1108					
14. 18	42. 25	14. 50	·1109					
14. 23	43. 10	15. 0	·1107					
14. 40	42. 20		***					
14. 48	41. 10	15. 42	·1108					
14. 56	43. 5	15. 58	·1105					
15. 7	42. 40	16. 39	·1110					
15. 30	44. 20	16. 57	·1108					
15. 40	43. 25	17. 6	·1110					
16. 15	45. 5	17. 54	·1107					
17. 3	43. 10	18. 48	·1105					
17. 36	42. 55	18. 55	·1104					
17. 49	42. 0	19. 6	·1104					
17. 56	42. 20	19. 23	·1102					
18. 39	40. 0	19. 45	·1101					
18. 49	41. 30	20. 15	·1098					
18. 59	40. 10	21. 7	·1103					
19. 8	41. 20	22. 7	·1101					
19. 31	39. 35	22. 59	·1103					
20. 13	42. 0	23. 21	·1104					
20. 55	42. 30	23. 41	·1107					
21. 56	47. 25	23. 59	·1106					
22. 2	47. 5							
23. 13	51. 0							
23. 23	50. 10							
23. 35	51. 0							
23. 59	50. 50							
Sept. 3		Sept. 3		Sept. 3		Sept. 3		
0. 0	20. 50. 40	0. 0	·1106	0. 0	·03405	0. 0	64 ·1	64 ·2
0. 12	51. 10	0. 31	·1113	2. 37:	·03132	1. 0	65 ·1	65 ·4
0. 24	53. 0	0. 46	·1108	4. 49:	·02738	2. 0	66 ·2	66 ·7
0. 42	50. 40	1. 9	·1108	5. 42	·02617	3. 0	67 ·2	67 ·4
0. 47	51. 25	1. 24	·1112	9. 22	·02576	Max.	68 ·8	69 ·2
1. 0	50. 30	1. 42	·1108	11. 14	·02620	9. 0	68 ·0	68 ·2
1. 49	50. 0	1. 53	·1111	15. 20:	·02703	18. 0	64 ·3	65 ·5
2. 33	47. 55	2. 8	·1111	19. 1	·02882	Min.	61 ·8	62 ·1
2. 43	48. 30	2. 38	·1107	20. 34	·03050	21. 0	63 ·2	64 ·0
3. 17	51. 35	2. 47	·1110	21. 6	·03077			
3. 52	46. 55	3. 26	·1112	21. 17	·03117			
4. 15	47. 5		***	23. 59	·03180			
4. 38	45. 55	4. 2	·1101					
5. 8	46. 30	4. 30	·1106					
6. 16	44. 5	4. 47	·1102					
7. 2	46. 0	5. 0	·1102					
7. 31	40. 20	5. 9	·1107					
8. 23	45. 0	5. 35	·1109					
9. 0	45. 30	5. 52	·1103					
9. 8	44. 25	5. 55	·1106					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 3		Sept. 3						
h m	° ′ ″	h m		h m		h m	°	°
9. 30	20. 44. 45	6. 10	·1104					
9. 53	44. 5	6. 29	·1110					
10. 0	44. 40	7. 20	·1104					
10. 11	43. 30	7. 38	·1111					
10. 39	43. 10	8. 15	·1106					
10. 54	44. 0	8. 47	·1107					
11. 8	43. 45	9. 9	·1103					
11. 45	44. 10	9. 47	·1108					
11. 58	43. 30	10. 5	·1104					
12. 27	44. 0	10. 26	·1101					
12. 35	43. 15	10. 48	·1104					
12. 57	43. 20	11. 58	·1104					
13. 7	44. 10	12. 8	·1106					
13. 34	43. 10	12. 38	·1103					
13. 57	43. 40	13. 9	·1105					
14. 15	43. 20	13. 29	·1103					
15. 21	44. 0	13. 45	·1103					
15. 31	43. 10	14. 0	·1106					
15. 46	43. 45	14. 39	·1106					
17. 36	42. 15	15. 2	·1104					
17. 50	41. 0	15. 31	·1104					
18. 38	43. 5	16. 23	·1105					
	***	17. 56	·1101					
19. 18	40. 10		***					
19. 28	41. 35	19. 22	·1101					
19. 37	40. 20	19. 52	·1096					
19. 47	41. 40	20. 38	·1093					
19. 55	40. 0	20. 50	·1094					
20. 24	41. 25	21. 28	·1088					
20. 40	41. 10	21. 43	·1096					
21. 23	46. 0	21. 53	·1095					
	***	22. 8	·1086					
21. 30	44. 55	23. 9	·1106					
22. 43	51. 0	23. 45	·1097					
22. 53	53. 5	23. 59	·1098					
23. 33	54. 50							
23. 59	53. 25							
Sept. 4		Sept. 4		Sept. 4		Sept. 4		
0. 0	20. 53. 25	0. 0	·1098	0. 0	·03180	1. 0	65 ·9	66 ·1
1. 9	53. 35	0. 12	·1102	0. 48	·03165	3. 0	66 ·2	67 ·0
1. 32	51. 0	0. 28	·1103	3. 38	·02970	Max.	66 ·8	68 ·0
	***	0. 52	·1110	5. 49	·02909	9. 0	66 ·0	68 ·0
2. 28	49. 10	1. 7	·1121	7. 36	·02847	18. 0	60 ·0	61 ·0
2. 42	49. 30	1. 37	·1108	8. 50	·02838	Min.	57 ·3	56 ·9
	***	2. 2	·1106	13. 2	·03038	21. 0	59 ·0	60 ·0
3. 20	47. 35	2. 36	·1106	15. 17	·03258			
3. 47	47. 35	2. 39	·1108	17. 43	·03542			
4. 33	45. 0		***	20. 12	·03620			
5. 3	44. 35	3. 17	·1105	22. 14	{·03637			
6. 2	45. 30	3. 35	·1104		·03460			
6. 16	45. 10	3. 53	·1112	23. 59	·03405			
6. 32	46. 5	4. 13	·1104					
7. 10	45. 50	4. 26	·1103					
7. 46	39. 25	4. 50	·1097					
8. 6	40. 30	5. 2	·1100					
8. 40	40. 5	5. 15	·1100					
9. 0	43. 15	5. 29	·1106					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 4		Sept. 4	
h m	° ′ ″	h m	
9. 3	20. 42. 15	5. 47	·1104
9. 33	45. 0	6. 17	·1110
10. 40	45. 35	6. 27	·1107
10. 58	44. 50	6. 38	·1111
11. 22	46. 35	6. 55	·1112
11. 36	45. 15	7. 4	·1115
11. 45	45. 50	7. 27	·1110
12. 0	45. 10	7. 44	·1112
12. 18	46. 50	7. 59	·1108
12. 41	44. 55	8. 23	·1117
12. 57	42. 0	8. 42	·1104
13. 31	43. 50	8. 48	·1105
13. 56	42. 25	9. 18	·1102
14. 11	44. 5	9. 35	·1103
14. 28	43. 0	10. 13	·1110
14. 52	44. 35	10. 22	·1108
15. 7	44. 25	10. 32	·1110
15. 48	45. 40	11. 8	·1108
16. 1	43. 30	11. 21	·1112
16. 7	44. 40	11. 38	·1111
16. 22	45. 40	11. 50	·1113
16. 38	44. 0	12. 7	·1110
16. 49	44. 35	12. 15	·1115
16. 58	43. 30	12. 40	·1120
17. 24	42. 40	13. 16	·1110
17. 37	42. 50	13. 38	·1112
17. 53	41. 45	14. 0	·1109
18. 15	43. 15	14. 9	·1114
18. 30	43. 0	14. 29	·1111
18. 42	44. 25	14. 50	·1116
18. 57	42. 55	15. 8	·1115
19. 6	43. 20	15. 27	·1107
19. 30	41. 30	15. 47	·1111
19. 37	42. 25	16. 0	·1109
19. 58	41. 50	16. 20	·1116
20. 20	42. 15	16. 28	·1115
20. 44	41. 40	16. 54	·1114
21. 3	42. 10	17. 5	·1117
	***	17. 23	·1116
22. 23	48. 30	18. 12	·1104
22. 53	49. 5	19. 0	·1112
23. 17	49. 50	19. 12	·1110
23. 24	51. 10	21. 4	·1107
23. 43	50. 10	21. 22	·1110
23. 53	51. 50	21. 30	·1106
23. 59	51. 30		***
		22. 9	·1104
		22. 22	·1105
		22. 34	·1102
		22. 47	·1103
		22. 50	·1099
		23. 27	·1101
		23. 43	·1097
		23. 59	·1100
Sept. 5		Sept. 5	
0. 0	20. 51. 30	0. 0	·1100
0. 24	52. 0	0. 25	·1097

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Sept. 5	

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Sept. 5		
Sept. 5	62 ·5	62 ·9
1. 0	64 ·0	64 ·0
3. 0		

Greenwich Mean Solar Time.	Western Declination.
Sept. 5	
h m	° ′ ″
0. 46	20. 51. 30
1. 23	51. 50
1. 53	51. 15
2. 48	48. 50
3. 1	48. 40
4. 0	46. 50
4. 49	46. 15
5. 0	46. 30
5. 10	45. 15
6. 20	45. 25
6. 39	43. 40
7. 18	43. 15
7. 31	44. 5
7. 41	43. 10
7. 45	43. 45
7. 54	42. 10
8. 10	43. 20
8. 20	43. 0
8. 38	43. 15
	(†)
9. 0	40. 33*
22. 30	48. 35
22. 45	50. 40
22. 54	49. 20
22. 57	50. 35
23. 44	53. 0
23. 52	54. 0
23. 59	53. 25
Sept. 6	
0. 0	20. 53. 25
0. 23	52. 0
0. 49	52. 50
1. 15	51. 15
1. 58	49. 15
2. 5	50. 0
2. 20	50. 10
2. 41:	48. 35
2. 59	48. 50
3. 9	48. 5
3. 38	46. 35
5. 8	44. 30
6. 23	43. 35
7. 5	45. 5
7. 26	43. 20
8. 2	45. 30
8. 16	44. 25
8. 58	45. 25
9. 40	44. 55
9. 52	46. 25
10. 18	45. 15
12. 3	45. 5
13. 23	44. 30
13. 34	44. 55
13. 52	44. 30
14. 0	46. 0
14. 26	43. 15
15. 5	44. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 5	
h m	
0. 36	·1103
1. 10	·1107
1. 28	·1105
1. 55	·1108
2. 4	·1107
3. 28	·1111
3. 56	·1114
4. 52	·1117
5. 2	·1119
5. 12	·1114
5. 25	·1119
5. 46	·1116
6. 6	·1119
6. 17	·1119
6. 51	·1121
7. 16	·1117
7. 32	·1118
	(†)
9. 0	·1115
22. 37	·1099
22. 45	·1101
22. 57	·1093
23. 26	·1102
23. 46	·1099
23. 59	·1102
Sept. 6	
0. 0	·1102
0. 22	·1102
0. 53	·1111
1. 11	·1110
1. 24	·1113
1. 55	·1111
2. 10	·1115
2. 24	·1116
2. 44	·1113
3. 3	·1118
3. 16	·1115
4. 14	·1112
4. 30	·1115
4. 45	·1114
5. 1	·1117
5. 27	·1118
5. 50	·1121
6. 13	·1116
6. 28	·1116
7. 11	·1119
7. 32	·1123
7. 48	·1121
8. 8	·1121
9. 3	·1115
9. 34	·1116
9. 45	·1119
9. 57	·1116
10. 23	·1115

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 5	
h m	
3. 59	·03097
7. 47:	·02998
10. 40	·03060
	(†)
22. 27	·03620
23. 27	·03646
23. 59	·03641
Sept. 6	
0. 0	·03641
2. 22:	·03500
6. 41	·02850
10. 20:	·02796
14. 15	·02900
18. 51:	·03110
23. 59	·02965

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 5	°	°
Max.	64 ·0	64 ·0
9. 0	63 ·0	63 ·6
Min.	54 ·8	54 ·2
22. 50	56 ·5	56 ·8
Sept. 6		
Max.	63 ·5	64 ·8
9. 0	63 ·0	64 ·8
18. 30	60 ·0	61 ·0
Min.	59 ·2	59 ·0
21. 0	60 ·6	61 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

September 5. The Photographic Traces for the three Magnetometers were partially lost, owing to a failure of gas.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 6		Sept. 6						
h m	° ′ ″	h m		h m		h m	°	°
16. 1	20. 42. 55	10. 38	·1118					
16. 40	44. 35	11. 0	·1117					
17. 27	42. 25	13. 10	·1116					
17. 38	43. 0	13. 35	·1118					
17. 51	41. 45	13. 48	·1124					
19. 57	41. 25	14. 23	·1119					
21. 23	44. 5	15. 26	·1122					
21. 33	45. 0	16. 10	·1118					
23. 24	51. 35	16. 45	·1123					
23. 38	51. 15	17. 44	·1116					
23. 48	52. 30	18. 47	·1115					
23. 59	52. 40	20. 54	·1105					
		21. 8	·1103					
		21. 47	·1105					
		22. 15	·1102					
		22. 39	·1103					
		23. 47	·1098					
		23. 59	·1100					
Sept. 7		Sept. 7		Sept. 7		Sept. 7		
0. 0	20. 52. 40	0. 0	·1100	0. 0	·02965	1. 0	63 ·0	63 ·4
0. 43	51. 55	0. 14	·1100	2. 9	·02785	3. 0	64 ·4	65 ·0
1. 22	51. 45	0. 46	·1098	2. 36	{·02776	Max.	65 ·6	66 ·3
2. 8	49. 40	1. 9	·1101		{·02830	9. 0	65 ·0	66 ·0
4. 38	44. 30	1. 24	·1106	3. 21	·02760	18. 20	58 ·9	59 ·5
6. 28	43. 35	1. 59	·1103	9. 9:	·02644	Min.	55 ·7	55 ·4
8. 37	45. 20	2. 32	·1106	14. 41	·02980	21. 0	57 ·4	58 ·0
10. 11	43. 50	3. 5	·1107	19. 37	·03618			
	***	3. 18	·1105	21. 23	·03661			
15. 30	44. 40	3. 41	·1107	23. 59	·03670			
15. 52	43. 55	4. 38	·1107					
16. 44	44. 45	5. 5	·1111					
17. 15	47. 30	5. 22	·1111					
17. 56	46. 0	5. 52	·1112					
18. 27	43. 5	8. 6	·1110					
18. 53	41. 45	8. 53	·1110					
19. 15	42. 10	9. 10	·1114					
20. 0	41. 25	9. 23	·1113					
20. 40	42. 0	10. 25	·1112					
20. 56	42. 50	10. 46	·1114					
21. 3	41. 55	11. 20	·1114					
22. 2	45. 5	14. 38	·1117					
22. 19	46. 25	15. 15	·1121					
22. 32	48. 5	15. 44	·1120					
22. 45	47. 35	15. 52	·1121					
23. 8	49. 15	16. 20	·1118					
23. 15	49. 0	17. 11	·1117					
23. 59	50. 50	17. 22	·1120					
		17. 39	·1121					
		18. 8	·1118					
		18. 59	·1118					
		20. 53	·1105					
		22. 15	·1110					
		22. 28	·1114					
		22. 47	·1111					
		23. 2	·1114					
		23. 12	·1112					
		23. 59	·1118					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 8		Sept. 8		Sept. 8		Sept. 8		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 50. 50	0. 0	·1118	0. 0	·03670	1. 0	59 ·3	59 ·8
0. 32	51. 45	0. 23	·1120	1. 21	·03645	3. 0	61 ·5	61 ·7
0. 48	52. 15	0. 36	·1117	3. 3	·03515	Max.	63 ·4	63 ·9
0. 58	51. 50	0. 47	·1124	5. 29	·03214	9. 0	63 ·4	63 ·9
1. 25	53. 5	1. 0	·1116	7. 25	·03046	18. 0	59 ·9	61 ·0
1. 39	52. 40	1. 47	·1124	7. 38	·03040	Min.	58 ·0	57 ·8
1. 45	53. 30	1. 56	·1121	8. 10	·02950	21. 0	59 ·2	60 ·0
1. 53	51. 55	2. 7	·1127	8. 37	·02925	22. 0	59 ·4	60 ·2
2. 1	53. 25	2. 15	·1120	9. 36	·02872	23. 0	60 ·0	61 ·0
2. 8	52. 35	2. 26	·1130	14. 2:	·02941			
2. 20	53. 5	2. 36	·1122	18. 57	·03163			
2. 25	54. 10	2. 40	·1128	22. 23	·03300			
2. 32	52. 50	2. 54	·1129	23. 21	·03300			
2. 38	54. 0	3. 0	·1139	23. 59	·03283			
2. 48	54. 30	3. 19	·1117					
2. 53	53. 30		***					
2. 57	55. 35	3. 40	·1114					
3. 4	54. 0	3. 54	·1119					
3. 25	52. 15	4. 4	·1119					
3. 28	52. 50	4. 7	·1116					
3. 35	52. 0	4. 26	·1116					
3. 54	54. 50	4. 33	·1105					
	***	4. 52	·1110					
4. 23	54. 30	5. 4	·1097					
4. 27:	54. 20	5. 22	·1121					
4. 46	52. 20	5. 31	·1114					
5. 0	49. 30	5. 54	·1117					
5. 18	49. 30	6. 1	·1112					
5. 26	47. 30	6. 9	·1116					
5. 52	48. 0	6. 38	·1111					
6. 0	46. 40	6. 53	·1093					
6. 19	46. 45	7. 9	·1113					
6. 29	46. 5	7. 12	·1109					
6. 40	48. 10	7. 15	·1113					
6. 48	45. 15	7. 23	·1102					
7. 2	39. 35	7. 35	·1119					
7. 9	41. 10	7. 52	·1118					
7. 19	40. 30	8. 0	·1105					
7. 32	35. 10	8. 17	·1100					
7. 43	38. 0	8. 26	·1105					
7. 52	38. 10	9. 16	·1113					
8. 2	43. 5	9. 35	·1111					
8. 25	41. 0	11. 3	·1114					
8. 59	44. 15	11. 39	·1112					
9. 35	45. 10	11. 53	·1113					
9. 55	44. 55	13. 12	·1113					
10. 39	45. 30	13. 41	·1119					
13. 18	44. 20	14. 17	·1115					
13. 32	44. 50	14. 48	·1118					
13. 57	44. 30	15. 18	·1118					
14. 14	43. 30	15. 38	·1115					
14. 27	46. 0	16. 0	·1120					
14. 42	45. 10	16. 9	·1116					
14. 47	46. 0	16. 32	·1119					
14. 56	44. 30	16. 55	·1115					
15. 7	44. 35	17. 15	·1119					
15. 30	43. 0	17 38	·1119					
15. 41	43. 30		***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 8		Sept. 8						
h m	° ′ ″	h m		h m		h m	°	°
15. 52	20. 42. 55	18. 54	·1104					
16. 0	43. 40	19. 6	·1105					
16. 12	42. 30	19. 25	·1102					
16. 32	43. 10	19. 39	·1107					
17. 0	41. 30	20. 10	·1107					
17. 20	42. 0	20. 27	·1104					
17. 43	41. 25	20. 35	·1106					
18. 3	43. 35	20. 56	·1100					
18. 13	43. 20	21. 3	·1102					
18. 18	44. 50	21. 13	·1100					
18. 27	43. 55	21. 29	·1102					
18. 37	45. 15	21. 53	·1097					
18. 45	44. 25	22. 1	·1102					
18. 54	44. 30	22. 23	·1104					
19. 5	45. 30	22. 30	·1102					
19. 13	47. 25	22. 39	·1105					
19. 31	48. 10	23. 11	·1102					
20. 4	46. 35		***					
20. 18	44. 10	23. 51	·1117					
20. 28	44. 45	23. 59	·1116					
20. 39	43. 50							
21. 50	49. 50							
22. 0	49. 15							
22. 6	50. 35							
22. 16	50. 5							
22. 27	51. 15							
22. 43	50. 15							
23. 1	50. 0							
23. 24	52. 5							
23. 31	51. 45							
23. 38	53. 25							
23. 59	54. 10							
Sept. 9		Sept. 9		Sept. 9		Sept. 9		
0. 0	20. 54. 10	0. 0	·1116	0. 0	·03283	0. 0	60·6	61·2
0. 35	52. 45	0. 12	·1103	0. 20	·03270	1. 0	61·6	62·2
0. 50	53. 0	0. 21	·1105	2. 3	·03178	2. 0	62·7	63·2
1. 5	54. 25	0. 44	·1105	3. 9	·03083	3. 0	63·4	64·2
1. 30	53. 10	1. 7	·1114	3. 57	·02937	6. 0	65·0	66·0
1. 42	54. 15	1. 21	·1113	5. 25	·02766	Max.	65·3	66·0
1. 56	53. 0	1. 30	·1107	6. 11	·02795	9. 0	65·0	66·0
2. 7	54. 20	1. 40	·1107	6. 30	·02766	12. 0	64·0	65·0
2. 20	53. 50	1. 50	·1103	6. 50	·02843	10. 0	60·3	61·5
2. 25	54. 30	2. 4	·1107	7. 9	·02798	Min.	58·0	57·8
2. 43	52. 50	2. 30	·1087	7. 33	·02765	21. 0	59·2	60·2
2. 55	50. 30	2. 42	·1094	7. 40	·02775	22. 0	59·5	60·6
3. 11	50. 20	2. 53	·1094	8. 13	·02740	23. 0	59·5	60·5
3. 30	51. 50	3. 8	·1103	8. 56	·02738			
3. 52	50. 0	3. 50	·1089	9. 55	·02677			
4. 15	49. 25	4. 2	·1107	10. 41	·02656			
4. 28	50. 0	4. 23	·1114	10. 56	·02610			
4. 35	49. 25	4. 37	·1106	11. 16	·02628			
4. 51	50. 40	4. 42	·1108	11. 57	·02560			
4. 59	49. 50	4. 54	·1102	12. 28	·02580			
5. 7	49. 55	5. 9	·1108	12. 47	·02625			
5. 46	43. 50	5. 26	·1102	13. 4	·02610			
6. 0	38. 30	5. 37	·1108	14. 15	·02716			
6. 20	44. 20	5. 44	·1104	14. 51	·02670			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 9		Sept. 9		Sept. 9				
h m	° ′ ″	h m		h m		h m	°	°
6. 43	20. 21. 40	5. 47	·1108	15. 26	·02683			
6. 48	20. 40	5. 57	·1140	16. 38:	·02890			
6. 58	25. 35	6. 12	·1140	17. 58	·03000			
7. 2	25. 15	6. 22	·1110	20. 48	·03305			
7. 10	29. 30	6. 35	·1093	23. 49	·03504			
7. 19	26. 15	6. 49	·1116		(†)			
7. 29	37. 5	6. 54	·1113					
7. 39	33. 15	7. 12	·1096					
7. 50	37. 5	7. 17	·1100					
7. 55	36. 35	7. 27	·1074					
8. 10	38. 30	7. 38	·1093					
8. 15	40. 5	7. 57	·1097					
8. 31	36. 55	8. 10	·1090					
8. 39	38. 50	8. 15	·1091					
9. 7	39. 35	8. 26	·1098					
9. 19	35. 10	8. 36	·1095					
9. 31	31. 35	9. 20	·1104					
9. 48	39. 35	9. 30	·1117					
10. 0	39. 10	9. 51	·1103					
10. 8	41. 45	10. 4	·1109					
10. 34	38. 45	10. 14	·1103					
10. 42	39. 10	10. 21	·1107					
11. 0	30. 0	10. 30	·1107					
11. 17	44. 25	10. 43	·1088					
11. 21	44. 10	10. 52	·1096					
11. 45	45. 55	10. 56	·1093					
11. 47	46. 50	11. 6	·1096					
11. 52	43. 30	11. 10	·1091					
12. 10	33. 45	11. 19	·1089					
12. 37	28. 30	11. 30	·1093					
12. 43	30. 5	11. 45	·1076					
12. 47	28. 45	11. 55	·1080					
12. 57	29. 15	12. 2	·1078					
13. 28	26. 10	12. 22	·1103					
13. 38	34. 20		***					
13. 43	34. 0	13. 2	·1087					
13. 50	44. 35	13. 11	·1098					
14. 2	54. 35	13. 34	·1094					
14. 13	53. 30	13. 52	·1067					
14. 17	54. 25	14. 23	·1102					
14. 22	52. 0	14. 37	·1089					
14. 28	53. 30	14. 47	·1087					
14. 40	53. 15	14. 55	·1098					
14. 58	50. 15	15. 6	·1102					
15. 3	51. 5	15. 15	·1097					
15. 20	41. 25	15. 30	·1103					
15. 29	42. 30	15. 38	·1097					
15. 39	41. 0	15. 56	·1104					
15. 47	42. 0	16. 8	·1101					
15. 58	45. 55		***					
16. 52	44. 0	17. 0	·1119					
17. 12	47. 55	17. 20	·1107					
17. 21	47. 10	17. 24	·1110					
17. 30	50. 30		***					
17. 32	47. 35	17. 48	·1097					
17. 37	48. 50	17. 55	·1099					
17. 41	45. 50		***					
17. 45	46. 30	18. 20	·1071					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 9		Sept. 9						
h m	° ′ ″	h m		° ″		h m	°	°
17. 53	20. 44. 35	18. 32	·1089					
18. 8	47. 40	18. 42	·1080					
18. 13	49. 55	18. 47	·1084					
18. 19	48. 30	18. 51	·1076					
18. 26	50. 50	19. 8	·1087					
18. 30	48. 0	19. 18	·1083					
18. 45	52. 50	19. 38	·1095					
18. 53	49. 15	19. 47	·1084					
19. 0	48. 10	19. 57	·1091					
19. 13	46. 25		***					
19. 18	50. 35	20. 30	·1090					
19. 38	53. 40	20. 33	·1082					
19. 47	52. 0	20. 42	·1098					
	***	20. 45	·1087					
20. 0	52. 50		***					
20. 9	50. 0	21. 53	·1039					
20. 39	46. 35	22. 8	·1059					
20. 52	48. 15	22. 12	·1054					
21. 0	45. 40	22. 21	·1070					
21. 4	47. 35	22. 29	·1059					
21. 27	48. 55	22. 34	·1069					
21. 45	56. 20	22. 44	·1067					
21. 53	54. 5	22. 50	·1076					
21. 58	56. 15	22. 56	·1067					
22. 9	54. 15	23. 4	·1084					
22. 15	55. 25	23. 15	·1063					
	***	23. 46	·1086					
23. 27	56. 25	23. 53	·1076					
23. 32	58. 25	23. 59	·1091					
23. 43	20. 57. 40							
23. 46	21. 1. 0							
23. 55	20. 56. 20							
23. 59	21. 0. 0							
Sept. 10		Sept. 10		Sept. 10		Sept. 10		
0. 0	21. 0. 0	0. 0	·1091		(†)	0. 0	60·0	60·9
0. 8	20. 56. 15	0. 7	·1077	0. 12	·03520	1. 0	60·2	60·9
0. 13	57. 5	0. 50	·1059	1. 0	·03661	2. 0	61·3	61·9
0. 22	52. 20	1. 5	·1083	1. 32	·03662	3. 0	62·3	63·3
0. 32	52. 0	1. 25	·1071	1. 45	·03628	Max.	63·6	64·3
0. 37	49. 50	1. 36	·1088	2. 8	·03620	9. 0	61·6	62·8
0. 42	52. 50	1. 47	·1072	2. 25	·03578	18. 0	55·2	57·0
0. 45	48. 45	2. 10	·1111	3. 42	·03460	Min.	53·0	52·7
0. 55	51. 10	2. 25	·1079	3. 52	·03485	21. 0	54·0	55·8
1. 0	54. 0	2. 37	·1099	4. 29	·03350			
1. 9	51. 15		***	6. 56:	·03145			
1. 25	47. 50	3. 5	·1100	9. 37	·03130			
1. 38	49. 55	3. 9	·1107	9. 56	·03106			
1. 46	49. 5	3. 28	·1088	11. 28	·03183			
1. 55	52. 25	3. 35	·1096	13. 0	·03318			
2. 7	54. 15	3. 42	·1083	14. 25:	·03413			
2. 10	58. 0	3. 50	·1138	16. 9	·03658			
2. 15	55. 40	4. 4	·1150	17. 13	·03660			
2. 29	52. 50	4. 28	·1098	20. 28	·03830			
2. 36	54. 30	4. 39	·1110	21. 8	·03842			
	***	4. 52	·1102		·03620			
2. 52	53. 40	5. 5	·1110	22. 53	·03686			
3. 0	55. 20	5. 30	·1097	23. 59	·03675			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 10		Sept. 10						
h m	° ′ ″	h m		h m		h m	°	°
3. 10	20. 56. 5	5. 38	·1097					
3. 24	53. 25	5. 47	·1090					
3. 27	51. 40	5. 52	·1092					
3. 34	50. 50	6. 0	·1089					
3. 48	35. 10	6. 35	·1103					
4. 1	40. 20	6. 46	·1100					
4. 6	39. 10	6. 58	·1106					
4. 11	42. 10	7. 7	·1101					
4. 25	38. 5	7. 21	·1102					
4. 38	39. 15	8. 0	·1107					
4. 53	37. 15	8. 15	·1105					
5. 7	42. 0	8. 23	·1110					
5. 38	44. 55	8. 38	·1105					
5. 46	44. 0	9. 13	·1125					
6. 9	45. 0	9. 22	·1107					
6. 30	44. 25	9. 37	·1134					
6. 56	45. 0	9. 47	·1130					
7. 1	45. 40	9. 59	·1136					
7. 27	44. 55	10. 12	·1132					
8. 8	44. 40	10. 20	·1116					
8. 24	43. 35	10. 37	·1106					
8. 33	44. 5	10. 40	·1107					
8. 46	42. 30	10. 44	·1105					
9. 8	36. 40	11. 1:	·1110					
9. 22	41. 10	11. 23	·1095					
9. 28	40. 20	11. 32	·1099					
9. 30	41. 25	12. 7	·1098					
9. 38	40. 35	12. 15	·1103					
9. 42	41. 35	12. 26	·1102					
9. 58	37. 50		***					
10. 22	47. 0	13. 20	·1116					
10. 32	45. 45	13. 28	·1103					
10. 43	45. 5	13. 54	·1094					
10. 51	43. 25	14. 6	·1100					
11. 8	38. 5	14. 26	·1095					
11. 21	40. 25	14. 41	·1107					
11. 35	38. 10	14. 50	·1105					
11. 46	38. 10	15. 6	·1107					
12. 13	41. 50	15. 15	·1102					
12. 26	43. 55	15. 40	·1108					
12. 35	43. 30	16. 4	·1118					
12. 56	46. 30	16. 42	·1097					
13. 10	45. 0	16. 53	·1097					
13. 26	46. 5	17. 8	·1089					
13. 35	47. 45	17. 43	·1098					
14. 0	47. 10	17. 59	·1105					
14. 10	50. 35	18. 18	·1098					
14. 28	47. 15	18. 23	·1102					
14. 57	42. 10		***					
15. 2	43. 0	18. 54	·1093					
15. 12	42. 10	19. 1	·1095					
15. 23	42. 50	19. 13	·1084					
15. 37	45. 5	19. 38	·1098					
15. 54	44. 10	19. 46	·1093					
16. 3	45. 35	20. 8	·1096					
16. 13	44. 50	20. 41	·1063					
16. 18	47. 10	20. 55	·1070					
16. 33	45. 20	21. 5	·1069					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 10		Sept. 10						
h m	° ′ ″	h m		h m		h m		
16. 43	20. 43. 10	21. 26	·1077					
16. 58	46. 20	21. 37	·1076					
17. 13	46. 15	22. 2	·1087					
17. 34	48. 35	22. 14	·1083					
17. 43	50. 0	22. 35	·1089					
17. 52	49. 25	22. 40	·1088					
18. 0	49. 30	22. 54	·1091					
18. 17	47. 0	23. 2	·1089					
18. 24	48. 5	23. 15	·1096					
18. 52	45. 50	23. 21	·1093					
18. 59	46. 55	23. 25	·1096					
19. 8	46. 10	23. 36	·1090					
19. 35	46. 10	23. 47	·1091					
19. 42	48. 40	23. 53	·1087					
19. 47	45. 45	23. 59	·1095					
19. 55	46. 5 ***							
20. 16	44. 35							
20. 30	48. 30							
20. 49	46. 25							
21. 3	50. 30							
21. 44	52. 0 ***							
22. 23	51. 25 ***							
23. 13	53. 25							
23. 18	52. 25							
23. 43	53. 0							
23. 54	55. 0							
23. 59	54. 35							
Sept. 11		Sept. 11		Sept. 11		Sept. 11		
0. 0	20. 54. 35	0. 0	·1095	0. 0	·03675	1. 0	56 ·9	57 ·8
0. 16	53. 35	0. 13	·1103	1. 44	·03600	3. 0	60 ·3	61 ·0
0. 26	54. 25	0. 35	·1100	4. 0	·03135	Max.	63 ·0	64 ·0
0. 40	53. 0	0. 45	·1090	6. 11:	·02922	9. 0	62 ·8	63 ·0
0. 49	54. 25	0. 50	·1092	8. 43	·02837	18. 0	56 ·4	57 ·4
1. 2	51. 45	1. 2	·1083		·02917	Min.	55 ·0	54 ·6
1. 18	53. 0	1. 23	·1102	12. 2	·02895	21. 0	56 ·0	57 ·0
1. 30	51. 10	1. 27	·1098	13. 9	·02928			
1. 46	52. 10	1. 35	·1102	15. 2	·02970			
1. 53	50. 45	1. 39	·1097	18. 25	·03375			
1. 58	51. 30	1. 53	·1104	21. 13	·03600			
2. 11	49. 5	2. 2	·1096	23. 59	·03690			
2. 27	50. 35	2. 8	·1099					
2. 40:	52. 5	2. 17	·1092					
2. 52	49. 40	2. 51	·1117					
3. 6	39. 0	3. 0	·1114					
3. 12	42. 30	3. 19	·1130					
3. 22	41. 5	3. 29	·1113					
3. 52	46. 15	3. 38	·1122					
4. 8	45. 20	4. 1	·1100					
4. 15	46. 10	4. 13	·1096					
4. 30	45. 5	4. 22	·1102					
4. 38	45. 30	4. 35	·1098					
5. 7	44. 25	4. 53	·1093					
5. 17	45. 5	5. 13	·1096					
5. 40	43. 50	5. 23	·1104					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 11		Sept. 11						
h m	° ′ ″	h m		h m		h m		
6. 48	20. 45. 15	5. 35	·1102					
7. 27	44. 40	5. 41	·1105					
7. 44	45. 15	6. 4	·1104					
7. 56	44. 35	6. 22	·1107					
8. 32	45. 5	6. 38	·1105					
9. 19	44. 30	6. 51	·1108					
10. 13	45. 15	7. 2	·1106					
10. 55	44. 45	7. 43	·1108					
11. 35	45. 10	8. 8	·1106					
12. 4	43. 0	8. 17	·1108					
12. 24	43. 20	8. 31	·1105					
12. 52	46. 15	8. 54	·1108					
13. 15	46. 25	9. 9	·1106					
13. 46	41. 50	10. 12	·1108					
14. 13	51. 45	10. 32	·1107					
14. 23	52. 0	11. 8	·1111					
14. 31	50. 45	11. 22	·1108					
14. 40	50. 55	11. 38	·1111					
14. 58	44. 25	12. 40	·1100					
15. 7	43. 50	13. 28	·1117					
15. 17	41. 45	13. 43	·1114					
15. 39	40. 0	13. 58	·1114					
15. 57	40. 10	14. 22	·1097					
16. 27	42. 30	15. 2	·1121					
18. 16	41. 10	15. 23	·1109					
18. 40	44. 45	16. 30	·1103					
18. 52	44. 35	17. 12	·1111					
19. 8	48. 40	18. 20	·1107					
19. 25	47. 55	18. 33	·1110					
19. 34	48. 10	18. 54	·1096					
19. 40	47. 10	19. 4	·1095					
19. 52	47. 20	19. 30:	·1081					
19. 58	48. 45	20. 11	·1099					
20. 8	47. 30	20. 23	·1096					
20. 11	48. 30	20. 38	·1103					
20. 17	48. 0		(†)					
20. 31	48. 45	21. 40	·1096					
20. 49	46. 50	22. 8	·1090					
21. 59	51. 25	22. 35	·1096					
22. 28	53. 50	22. 47	·1086					
22. 39	53. 25	23. 5	·1080					
22. 56	55. 5	23. 22	·1089					
23. 10	54. 25	23. 37	·1094					
23. 24	56. 5	23. 53	·1106					
23. 39	55. 15	23. 59	·1103					
23. 47	55. 55							
23. 59	55. 25							
Sept. 12		Sept. 12		Sept. 12		Sept. 12		
0. 0	20. 55. 25	0. 0	·1103	0. 0	·03690	1. 0	58 ·7	59 ·0
0. 25	55. 30	0. 32	·1108	0. 30	·03697	3. 0	61 ·3	61 ·6
0. 40	53. 35	0. 40	·1101	1. 35	·03645	Max.	64 ·5	64 ·0
1. 3	53. 10	0. 56	·1102	3. 2	·03463	9. 0	64 ·3	64 ·0
1. 25	54. 50	1. 29	·1119	4. 32	·03195	Min.	57 ·0	56 ·9
1. 39	54. 50	1. 43	·1116	6. 46	·02867	22. 30	58 ·6	59 ·0
1. 47	53. 10	1. 55	·1104	11. 4:	·02770			
2. 13	50. 30	2. 30	·1101	15. 29	·02920			
2. 27	47. 55	2. 38	·1103	20. 10	·03215			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Sept. 12	
h m	° ′ ″
2. 38	20. 48. 35
2. 46	47. 45
3. 10	48. 25
3. 34	46. 10
4. 13	44. 30
4. 28	51. 50
4. 37	38. 15
4. 45	38. 20
4. 49	39. 25
5. 0	39. 5
5. 13:	40. 45
5. 24	39. 30
5. 52	41. 5
6. 8	39. 25
6. 27	40. 10
6. 58	39. 10
7. 5	40. 5
7. 15	39. 30
7. 28	42. 10
8. 0	41. 30
8. 19	42. 0
9. 0	44. 20
10. 32	44. 45
10. 49	45. 55
11. 17	44. 10
11. 23	44. 40
12. 21	44. 30
13. 7	44. 0
13. 47	44. 15
14. 48	43. 15
16. 27	43. 10
18. 36	41. 10
19. 18	41. 45
19. 27	41. 15
19. 31	42. 10
19. 38	41. 25
20. 0	42. 35
20. 4	41. 35
20. 40	44. 35
21. 0	44. 55
21. 15	47. 30
21. 41	49. 55
22. 10	48. 15
22. 30	48. 15
23. 6	49. 40
23. 11	50. 30
23. 22	50. 15
23. 27	51. 20
23. 51	52. 30
23. 59	53. 50
Sept. 13	
0. 0	20. 53. 50
0. 11	54. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 12	
h m	
2. 47	·1099
2. 55	·1100
3. 15	·1096
3. 28	·1098
3. 52	·1095
4. 17	·1099
4. 26	·1096
4. 38	·1101
4. 41	·1107
4. 58	·1102
5. 8	·1104
5. 22	·1102
5. 45	·1106
6. 2	·1100
6. 22	·1103
6. 45	·1101
6. 53	·1104
7. 4	·1103
7. 9	·1105
7. 23	·1100
7 44	·1099
8. 2	·1100
8. 13	·1104
8. 47	·1106
8. 53	·1106
9. 10	·1108
9. 23	·1107
9. 38	·1111
9. 52	·1107
10. 30	·1111
10. 44	·1110
10. 58	·1111
11. 14	·1107
11. 25	·1108
11. 37	·1107
11. 53	·1106
12. 5	·1108
12. 18	·1107
13. 40	·1109
13. 50	·1108
15. 8	·1107
17. 40	·1110
18. 41	·1108
19. 58	·1101
20. 17	·1104
20. 48	·1098
21. 6	·1085
21. 17	·1088
21. 35	·1087
22. 17	·1097
22. 27	·1103
23. 10	·1104
23. 48	·1103
23. 59	·1102
Sept. 13	
0. 0	·1102
0. 26	·1107

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 12	
h m	
23. 23	·03340
23. 59	·03334
Sept. 13	
0. 0	·03334
2. 24:	·03214

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Sept. 13		
Max.	65 ·0	65 ·0

Greenwich Mean Solar Time.	Western Declination.
Sept. 13	
h m	° ′ ″
0. 22	20. 53. 30
0. 31	54. 5
0. 41	52. 45
1. 22	54. 0
1. 39	52. 0
2. 8	51. 35
2. 16	50. 40
2. 30	50. 50
2. 54	49. 30
3. 7	48. 20
3. 13	49. 15
3. 23	49. 10
4. 2	46. 25
4. 22	46. 30
4. 28	47. 20
5. 1	34. 0
5. 13	37. 40
5. 27	39. 15
5. 38	41. 50
5. 49	41. 0
6. 8	42. 0
6. 23	40. 40
6. 32	40. 50
6. 55	38. 15
7. 13	42. 0
7. 22	41. 55
7. 31	43. 15
7. 43	42. 45
8. 2	45. 20
8. 24	43. 40
9. 5	44. 30
9. 36	44. 10
9. 55	45. 40
10. 15	45. 10
10. 39	45. 35
11. 28	43. 25
11. 50	44. 5
12. 2	46. 15
12. 15	46. 15
12. 27	42. 30
12. 39	42. 40
12. 56	41. 30
13. 6	42. 0
13. 15	40. 30
14. 23	41. 10
14. 39	42. 40
15. 1	41. 35
	***
16. 29	43. 10
16. 53	40. 20
17. 16	42. 10
17. 33	41. 30
17. 53	42. 35
18. 12	41. 0
	***
19. 0	42. 30
19. 18	41. 0
19. 40	41. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 13	
h m	
0. 32	·1107
0. 43	·1104
1. 24	·1108
1. 41	·1101
1. 58	·1101
2. 18	·1095
2. 32	·1101
2. 58	·1097
3. 8	·1092
3. 29	·1099
3. 38	·1096
3. 47	·1097
4. 0	·1091
4. 5	·1094
4. 8	·1092
4. 23	·1096
4. 32	·1106
4. 51	·1091
5. 12	·1116
5. 20	·1109
5. 30	·1108
5. 38	·1114
5. 50	·1101
6. 0	·1110
6. 15	·1114
6. 23	·1109
6. 35	·1108
7. 0	·1095
7. 10	·1097
7. 21	·1094
7. 37	·1098
7. 45	·1098
8. 40	·1113
9. 7	·1109
9. 40	·1108
10. 2	·1104
10. 32	·1106
10. 43	·1104
11. 53	·1106
12. 25	·1128
	***
13. 39	·1105
14. 16	·1102
14. 25	·1099
14. 45	·1105
15. 0	·1102
15. 38	·1105
16. 18	·1104
16. 52	·1115
17. 30	·1109
18. 21	·1111
19. 21	·1105
19. 48	·1106
20. 32	·1094
20. 46	·1097
21. 15	·1084
21. 38	·1085
22. 1	·1077

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 13	
h m	
4. 48	·02946
5. 9	·02935
5. 54	·02830
7. 13	·02790
9. 15:	·02695
12. 7	·02695
12. 38	·02673
16. 27:	·02937
21. 28	·03598
22. 49	·03690
23. 59	·03690

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 13		
h m	°	°
9. 0	65 ·0	65 ·0
18. 0	59 ·3	60 ·3
Min.	55 ·5	55 ·1
21. 0	57 ·0	58 ·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 13		Sept. 13						
h m	° ′ ″	h m		h m		h m	°	°
19. 45	20. 43. 0	22. 25	·1086					
19. 52	41. 15	22. 38	·1078					
20. 13	43. 10	23. 7	·1088					
20. 22	44. 30	23. 18	·1102					
20. 57	46. 30	23. 26	·1103					
21. 16	45. 30		(†)					
21. 23	47. 5							
21. 33	46. 30							
21. 41	47. 10							
21. 53	47. 10							
22. 10	50. 5							
22. 25	49. 25							
22. 36	51. 0							
22. 53	50. 5							
23. 13:	53. 30							
23. 47	51. 55							
23. 59	51. 55							
Sept. 14		Sept. 14		Sept. 14		Sept. 14		
0. 0	20. 51. 55		(†)	0. 0	·03690	1. 0	58 ·5	59 ·0
0. 6	51. 45	0. 32	·1114	2. 52	·03662	3. 0	60 ·1	60 ·7
0. 13	52. 25	1. 0	·1116	4. 57	·03440	Max.	62 ·1	62 ·3
0. 41	51. 30	1. 28	·1112	5. 9	·03444	9. 0	62 ·0	62 ·3
0. 56	53. 15	1. 45	·1116	6. 10	·03320	18. 0	59 ·5	60 ·1
1. 22	51. 45	2. 13	·1107	6. 22	·03317	Min.	57 ·6	57 ·4
1. 43	52. 40	2. 38	·1114	10. 39:	·03060	21. 0	59 ·0	59 ·5
1. 52	51. 20	2. 53	·1116	14. 22	·03085			
1. 59	52. 45	3. 17	·1096	14. 48	·03079			
2. 11	51. 0	3. 47	·1100	16. 10	·03148			
2. 20	51. 0	3. 53	·1098	21. 47	·03347			
2. 41	48. 25	4. 11	·1114	22. 52	·03364			
2. 50	47. 35	4. 23	·1115	23. 37	·03347			
3. 30	47. 0	4. 47	·1086	23. 59	·03355			
3. 39	46. 0	4. 58	·1102					
4. 8	46. 25	5. 10	·1104					
4. 33	45. 10	5. 23	·1115					
4. 45	36. 40	5. 38	·1107					
5. 1	38. 10	5. 43	·1108					
5. 13	37. 10	5. 58	·1102					
5. 23	41. 5	6. 12	·1122					
5. 40	42. 40	6. 25	·1112					
5. 58	37. 0	6. 44	·1117					
6. 13	42. 50	6. 55	·1111					
6. 23	42. 10	7. 4	·1114					
6. 45	44. 25	7. 17	·1113					
6. 58	43. 25	7. 28	·1114					
7. 16	42. 40	7. 38	·1111					
7. 38	40. 15	7. 55	·1114					
8. 10	40. 50	8. 20	·1105					
8. 23	37. 50	8. 28	·1111					
8. 27	38. 30	8. 35	·1111					
8. 38	36. 5	8. 58	·1125					
9. 0	42. 0	9. 44	·1111					
9. 10	42. 0	11. 52	·1114					
9. 19	44. 30	12. 43	·1113					
9. 36	45. 35	13. 7	·1118					
9. 47	44. 35	13. 55	·1118					
10. 0	45. 0	14. 2	·1116					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 14		Sept. 14						
h m	° ′ ″	h m		h m		h m	°	°
10. 29	20. 44. 30	14. 22	·1120					
12. 43	44. 5	14. 34	·1120					
12. 59	44. 55	14. 38	·1118					
13. 23	43. 50	14. 54	·1119					
13. 37	47. 25	15. 11	·1112					
13. 58	44. 30		***					
14. 20	53. 10	15. 38	·1112					
14. 34	51. 20		***					
15. 16	44. 15	16. 3	·1116					
15. 21	44. 45		***					
15. 32	43. 25	16. 48	·1116					
15. 47	44. 35	17. 5	·1118					
16. 0	44. 0		***					
16. 6	44. 35	17. 53	·1117					
16. 36	43. 25	18. 8	·1108					
17. 45	43. 10	18. 33	·1100					
18. 9	45. 10	18. 55	·1099					
18. 15	44. 50	19. 16	·1104					
18. 51	49. 30	19. 26	·1101					
19. 8	48. 15	20. 3	·1103					
19. 17	49. 20	20. 20	·1109					
20. 7	43. 5	20. 55	·1104					
22. 43	48. 0	21. 48	·1103					
22. 57	51. 50	22. 41	·1098					
23. 16	51. 30	22. 49	·1099					
23. 26	51. 35		(†)					
23. 41	51. 35	23. 23	·1105					
23. 57	53. 35	23. 41	·1103					
23. 59	53. 15	23. 59	·1077					
Sept. 15		Sept. 15		Sept. 15		Sept. 15		
0. 0	20. 53. 15	0. 0	·1077	0. 0	·03355	1. 0	60 ·6	61 ·0
0. 7	52. 45	0. 9	·1085	1. 0	·03339	3. 0	62 ·4	62 ·8
0. 22	55. 0	0. 22	·1080		·03280	Max.	63 ·8	63 ·8
0. 28	53. 25	0. 33	·1085	1. 41	·03270	9. 0	62 ·6	63 ·0
0. 46	53. 15	0. 43	·1077	3. 0	·03168	18. 0	59 ·7	59 ·8
0. 57	53. 45	0. 52	·1078	5. 7	·02920	Min.	57 ·8	57 ·4
1. 5	53. 25	1. 40	·1097	5. 30	·02923	21. 6	59 ·2	59 ·2
1. 28	53. 35		***	6. 10	·02880	22. 0	59 ·2	59 ·2
2. 0	51. 35	1. 57	·1093	8. 57	·02812	23. 0	59 ·9	59 ·9
2. 11	52. 10	2. 8	·1094	10. 25	·02805			
2. 18	51. 5	2. 35	·1119	12. 33	·02847			
2. 29	51. 5	2. 56	·1097	13. 15	·02872			
2. 38	50. 15	3. 4	·1103	13. 50	·02852			
2. 52	51. 0		***	17. 38:	·03090			
3. 8	50. 0	4. 32	·1095	20. 58	·03220			
3. 27	48. 20	4. 40	·1108	23. 59	·03240			
3. 30	48. 30	4. 53	·1105					
4. 1	46. 35	5. 8	·1086					
4. 10	47. 30	5. 32	·1110					
4. 20	46. 10	5. 47	·1112					
4. 28	46. 35	5. 53	·1116					
4. 46	44. 50	6. 16	·1104					
4. 54	41. 15	6. 24	·1106					
5. 7	35. 10	6. 37	·1103					
5. 15	34. 5	6. 42	·1104					
5. 28	35. 0	7. 0	·1100					
5. 41	38. 40	7. 8	·1103					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 15		Sept. 15						
h m	° ′ ″	h m		h m		h m	°	°
5. 57	20. 40. 0	7. 38	·1099					
6. 12	38. 5	7. 52	·1105					
6. 22	38. 40	8. 8	·1098					
6. 29	38. 5	8. 20	·1117					
6. 47	41. 30	8. 36	·1107					
7. 24	41. 50	8. 45	·1107					
7. 43	38. 55	9. 8	·1099					
7. 52	39. 25	9. 30	·1103					
8. 9	24. 30	9. 53	·1099					
8. 27	36. 35	10. 9	·1102					
8. 41	39. 10	10. 30	·1097					
8. 58	38. 45	10. 39	·1103					
9. 10	39. 40	11. 1	·1107					
10. 7	38. 0	11. 38	·1102					
10. 25	41. 15	11. 53	·1107					
10. 37	38. 0	12. 1	·1106					
10. 45	38. 50	12. 9	·1108					
10. 58	38. 0	12. 17	·1104					
11. 30	43. 0	12. 28	·1107					
11. 46	42. 50	12. 47	·1102					
11. 52	44. 5	13. 6	·1103					
12. 3	43. 20	13. 23	·1105					
12. 13	44. 35	13. 32	·1106					
12. 22	44. 0	13. 51	·1124					
12. 26	44. 35	14. 0	·1118					
12. 47	43. 55	14. 8	·1118					
13. 12	47. 10	14. 17	·1120					
13. 30	55. 10	14. 37	·1112					
13. 51	51. 0	15. 22	·1108					
14. 0	50. 15	15. 49	·1109					
14. 15	45. 50	15. 58	·1112					
14. 26	44. 35		***					
14. 45	42. 40	16. 32	·1112					
15. 6	42. 35	16. 47	·1114					
15. 41	43. 10	17. 27	·1115					
15. 51	42. 15	17. 31	·1117					
15. 58	43. 35	17. 48	1106					
16. 20	42. 50	18. 5	·1103					
16. 28	42. 0		***					
16. 37	42. 30	18. 42	·1110					
16. 45	44. 5	19. 2	·1104					
17. 28	43. 35	20. 8	·1095					
17. 47	46. 5	20. 15	·1096					
18. 9	45. 5	20. 24	·1091					
18. 15	45. 45	20. 37	·1094					
18. 22	47. 25	20. 42	·1087					
18. 27	45. 0	20. 52	·1089					
18. 36	44. 0	21. 12	·1081					
18. 41	45. 5	21. 41	·1092					
18. 46	43. 25	21. 51	·1086					
18. 51	44. 50		***					
18. 59	43. 20	22. 28	·1086					
19. 13	43. 50		***					
19. 41	41. 15	23. 28	·1092					
19. 52	43. 20	23. 38	·1087					
20. 2	42. 10	23. 52	·1094					
20. 13	44. 30	23. 59	·1094					
20. 28	44. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 15								
h m	° ′ ″	h m		h m		h m	°	°
20. 37	20. 42. 50							
20. 46	42. 25							
21. 0	43. 30							
21. 10	42. 25							
21. 27	43. 25							
21. 38	45. 10							
21. 46	44. 20							
	***							
22. 25	47. 5							
22. 28	46. 10							
23. 5	48. 0							
23. 11	47. 10							
23. 20	50. 25							
23. 27	49. 0							
23. 59	50. 35							
Sept. 16		Sept. 16		Sept. 16		Sept. 16		
0. 0	20. 50. 35	0. 0	·1094	0. 0	·03240	0. 0	60 ·5	60 ·3
0. 10	50. 35	0. 24	·1099	1. 18	·03200	1. 0	61 ·6	61 ·2
0. 22	52. 10	0. 47	·1094	2. 47	·03064	2. 0	62 ·6	62 ·2
0. 38	51. 10	1. 8	·1106	4. 28	·02810	3. 0	63 ·5	63 ·3
0. 50	51. 20	1. 24	·1103	5. 13	{·02780	6. 0	64 ·6	64 ·8
1. 0	53. 15	1. 35	·1104		{·02863	Max.	64 ·8	65 ·3
1. 28	53. 50	1. 51	·1096	7. 45:	·02715	9. 0	64 ·6	64 ·3
1. 45	52. 5	2. 2	·1101	11. 8	·02706	12. 0	62 ·5	62 ·5
1. 56	52. 40	2. 11	·1100	11. 37	·02730	Min.	54 ·4	54 ·8
2. 22	49. 35	2. 27	·1102	12. 23	·02730	21. 0	55 ·8	56 ·2
3. 2	50. 25		***	13. 13	·02797	22. 0	56 ·4	56 ·8
3. 20	48. 10	2. 47	·1107	15. 58:	·03065	23. 0	56 ·7	57 ·0
3. 25	48. 55	2. 58	·1100	19. 46	{·03593			
3. 56	46. 15		***		{·03540			
4. 15	46. 25	3. 35	·1100	21. 0	{·03653			
4. 38	44. 10	4. 2	·1098		{·03480			
4. 58	45. 35	4. 44	·1107	21. 49	·03535			
5. 15	42. 5	4. 58	·1098		(†)			
5. 25	42. 0	5. 11	·1099	23. 59	·03453			
5. 42	40. 30	5. 23	·1096					
5. 58	41. 0	5. 40	·1096					
7. 0	43. 55	6. 8	·1102					
7. 16	43. 30	6. 31	·1100					
7. 27	44. 15	6. 53	·1103					
7. 57	43. 0	7. 11	·1102					
8. 24	44. 0	7. 23	·1106					
8. 33	43. 35	7. 54	·1099					
8. 52	44. 25	8. 10	·1102					
9. 38	43. 10	8. 23	·1102					
9. 56	44. 25	8. 52	·1106					
10. 14	43. 5	9. 0	·1103					
10. 25	44. 5	9. 31	·1107					
10. 32	43. 10	9. 41	·1113					
10. 44	45. 40	10. 6	·1107					
11. 13	43. 0	10. 18	·1118					
11. 26	43. 50	10. 29	·1114					
11. 42	46. 55	10. 39	·1123					
11. 58	46. 35	11. 8	·1108					
12. 30	41. 20	11. 30	·1116					
12. 40	40. 35	12. 2	·1110					
12. 58	42. 30	12. 12	·1112					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 16		Sept. 16	
h m	° ′ ″	h m	
13. 7	20. 43. 30	12. 38	·1103
13. 32	42. 0	12. 52	·1102
13. 43	42. 15	13. 14	·1109
14. 8	39. 25	13. 39	·1112
14. 32	40. 10	14. 13	·1108
14. 56	42. 35	16. 7	·1110
15. 16	42. 45	16. 24	·1112
15. 29	44. 20		***
	***	18. 2	·1114
19. 45	43. 50	18. 30	·1112
19. 53	47. 45		***
20. 2	43. 50	19. 31	·1113
20. 13	43. 30	20. 9	·1107
20. 23	42. 30		***
20. 36	43. 5	20. 53	·1107
20. 43	42. 15	21. 6	·1111
20. 45	40. 25	21. 21	·1110
21. 24	44. 0		***
21. 30	42. 45	22. 2	·1103
21. 53	47. 50	22. 23	·1101
22. 7	48. 0		(†)
22. 15	45. 30		
	***		
22. 37	51. 0		
	***		
22. 55	52. 10		
23. 13	46. 40		
	***		
23. 45	48. 30		
23. 59	50. 35		

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m		°	°
Sept. 17		Sept. 17	
0. 0	·03453	0. 0 58 ·0	58 ·0
1. 5	·03450	1. 0 58 ·4	58 ·5
1. 30	·03410	2. 0 59 ·6	59 ·4
1. 43	·03420	3. 0 61 ·0	61 ·0
3. 1	·03290	Max. 63 ·7	64 ·7
4. 43	·03026	9. 0 63 ·7	64 ·7
	·03148	18. 40 59 ·0	58 ·8
5. 24	·03085	Min. 57 ·0	56 ·5
5. 35	·03108	21. 0 58 ·0	58 ·2
6. 32	·02968		
7. 39	·02893		
9. 15	·02858		
	·03051		
11. 7	·03022		
11. 40	·03000		
13. 40	·03102		
16. 30	·03340		
18. 14	·03437		
	·03360		
18. 50	·03360		
19. 8	·03420		
19. 45	·03420		
	·03388		
20. 41	·03420		
	·03462		
21. 28	·03440		
	·03250		

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 17		Sept. 17	
h m	° ′ ″	h m	
9. 39	20. 43. 5	9. 26	·1107
9. 54	43. 25	9. 49	·1112
10. 26	40. 35	10. 28	·1110
10. 41	40. 30	10. 39	·1110
10. 56	45. 20	11. 0	·1127
11. 7	44. 0	11. 40	·1117
11. 31	43. 25	12. 9	·1114
12. 0	38. 45	12. 32	·1106
12. 40	35. 30	12. 45	·1104
12. 56	38. 25	13. 2	·1108
13. 19	39. 10	13. 30	·1104
13. 30	38. 5	13. 52	·1103
13. 57	40. 40	14. 4	·1107
14. 18	48. 25	14. 20	·1102
14. 57	45. 5	14. 48	·1113
15. 10	43. 20	14. 55	·1112
15. 43	42. 5	15. 36	·1117
16. 13	42. 5	16. 11	·1112
16. 30	43. 35	16. 24	·1115
16. 41	42. 25	16. 36	·1113
17. 0	43. 20	17. 14	·1115
18. 47	41. 30	19. 40	·1113
18. 57	41. 50	21. 28	·1105
	***	22. 17	·1104
19. 48	41. 0	22. 26	·1106
20. 53	41. 55	22. 45	·1104
21. 0	41. 10	23. 5	·1106
21. 8	42. 5		(†)
21. 22	42. 20		
22. 28	45. 30		
22. 39	45. 15		
23. 23	48. 50		
23. 40	52. 15		
23. 59	52. 5		

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 17	
h m	
22. 13	·03184
	·03102
23. 2	·03108
23. 39	·03080
	·03310
23. 59	·03285

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 18		Sept. 18	
h m	° ′ ″	h m	
0. 0	20. 52. 5		(†)
0. 7	53. 40	0. 3	·1104
0. 13	53. 0	0. 37	·1107
0. 28	54. 0	0. 43	·1104
0. 36	53. 0	0. 59	·1104
0. 51	53. 50	1. 15	·1098
1. 2	52. 50	1. 38	·1104
2. 13	55. 50	2. 10	·1103
2. 43	51. 30	2. 21	·1106
3. 3	50. 40	2. 28	·1104
3. 10	51. 50	2. 38	·1105
3. 26	50. 10	2. 51	·1100
3. 33	48. 55	3. 9	·1099
3. 45	50. 0	3. 17	·1106
4. 0	44. 45	3. 43	·1101
4. 8	41. 10	3. 51	·1104
4. 16	42. 30	3. 56	·1101
4. 38	43. 15	4. 4	·1104
4. 48	44. 30	4. 13	·1094
4. 55	43. 45	4. 38	·1099
5. 17	45. 30	4. 50	·1105

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 18	
h m	
0. 0	·03285
1. 25	·03232
3. 10	·03087
4. 38	·03023
6. 2	·02884
7. 30	·02784
11. 40	·02781
14. 2	·02920
14. 57	·02960
16. 23	·03100
20. 27	·03401
22. 15	·03463
22. 23	·03440
23. 1	·03457
23. 59	·03422

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 18		
h m	°	°
1. 0	60 ·6	60 ·2
3. 0	62 ·3	62 ·0
Max.	66 ·2	67 ·0
9. 0	64 ·6	65 ·5
18. 0	60 ·0	60 ·4
Min.	57 ·3	57 ·7
21. 0	59 ·5	59 ·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 18		Sept. 18						
h m	° ′ ″	h m		h m		h m	°	°
5. 27	20. 44. 50	5. 0	·1105					
5. 42	46. 30	5. 6	·1101					
6. 12	46. 0	5. 12	·1102					
6. 36	43. 20	5. 32	·1098					
7. 7	44. 35	5. 39	·1102					
7. 19	43. 25	5. 49	·1101					
7. 42	45. 40	6. 10	·1103					
7. 59	43. 5	6. 24	·1096					
9. 24	44. 30	6. 37	·1094					
9. 40	43. 40	7. 9	·1097					
10. 0	44. 25	7. 28	·1102					
10. 15	43. 35	7. 55	·1094					
10. 30	39. 5	8. 32	·1103					
11. 2	41. 25	8. 43	·1101					
11. 11	39. 50	9. 42	·1106					
11. 19	41. 0	9. 51	·1111					
11. 45	36. 50	9. 56	·1112					
	(†)	10. 10	·1107					
12. 29	36. 45	10. 30	·1122					
12. 45	38. 5	10. 45	·1117					
13. 9	37. 10	11. 4	·1115					
13. 15	38. 5	11. 12	·1116					
13. 34	37. 30	11. 39	·1110					
13. 48	41. 25	11. 48	·1112					
14. 19	42. 45	12. 12	·1104					
14. 56	37. 35	12. 23	·1106					
15. 6	37. 15	12. 58	·1099					
15. 33	39. 30	13. 13	·1101					
15. 47	39. 30	13. 32	·1098					
16. 0	41. 10	13. 43	·1101					
16. 5	40. 30	13. 50	·1100					
16. 22	41. 35	14. 38	·1113					
16. 40	41. 40	15. 15	·1105					
16. 59	44. 25	15. 38	·1104					
17. 36	45. 5	15. 55	·1109					
18. 18	46. 30	16. 3	·1105					
18. 34	45. 15	16. 39	·1115					
19. 16	47. 55	16. 56	·1115					
19. 57	44. 15	17. 29	·1112					
20. 16	44. 10	17. 49	·1107					
21. 54	47. 15	17. 55	·1109					
22. 21	49. 30	18. 15	·1103					
23. 27	50. 0	18. 32	·1103					
23. 46	51. 30	18. 45	·1106					
23. 59	51. 15	19. 22	·1107					
		19. 29	·1108					
		19. 41	·1107					
		19. 52	·1109					
		19. 59	·1107					
		20. 17	·1110					
		20. 45	·1108					
		22. 12	·1095					
		22. 22	·1095					
		22. 54	·1080					
		23. 20	·1084					
		23. 40	·1096					
		23. 59	·1094					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 19		Sept. 19		Sept. 19		Sept. 19		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 51. 15	0. 0	·1094	0. 0	·03422	1. 0	62 ·6	62 ·6
0. 13	50. 30	0. 30	·1099	1. 0	·03340	3. 0	65 ·5	65 ·8
0. 39	52. 10	1. 2	·1094		·03270	Max.	68 ·2	68 ·9
0. 52	51. 5	1. 45	·1100	1. 28	·03210	9. 0	67 ·1	67 ·5
1. 0	51. 35	1. 55	·1105	2. 41	·02960	Min.	58 ·9	58 ·3
1. 48	48. 50	2. 13	·1103	3. 22	·02864	21. 30	60 ·9	61 ·7
2. 0	49. 10	2. 31	·1105	9. 40:	·02641			
2. 10	48. 30	2. 43	·1102	15. 1	·02770			
3. 59	47. 30	3. 8	·1104	15. 39	·02776			
4. 42	45. 40	3. 26	·1099	18. 11:	·02962			
5. 27	45. 55	3. 35	·1100	21. 28	·03347			
5. 47	44. 50	4. 2	·1090	21. 45	·03342			
6. 20	44. 30	4. 27	·1093	22. 13	·03384			
6. 33	43. 55	4. 50	·1099	23. 59	·03490			
7. 6	44. 0	5. 2	·1096					
7. 11	44. 10	5. 32	·1092					
7. 40	43. 10	5. 47	·1097					
8. 40	43. 15	5. 58	·1098					
9. 15	37. 0	6. 7	·1096					
10. 1	41. 40	6. 15	·1097					
10. 46	43. 10	6. 22	·1099					
12. 37	43. 15	6. 28	·1095					
12. 47	43. 40	6. 36	·1101					
13. 23	41. 55	6. 52	·1102					
14. 6	42. 0	7. 10	·1098					
14. 41	43. 0	7. 44	·1098					
15. 11	50. 0	7. 55	·1101					
15. 47	43. 5	8. 13	·1099					
16. 41	43. 25	8. 30	·1100					
17. 1	44. 25	8. 40	·1102					
17. 17	45. 30	9. 8	·1100					
18. 1	42. 50	10. 3	·1100					
18. 15	44. 0	10. 22	·1102					
18. 47	42. 25	11. 17	·1103					
18. 58	43. 25	11. 28	·1105					
19. 22	43. 20	11. 42	·1103					
19. 48	50. 35	12. 23	·1104					
20. 3	50. 20	12. 40	·1109					
20. 26	51. 35	14. 35	·1108					
20. 33	51. 5	14. 50	·1110					
20. 45	49. 20	15. 8	·1108					
20. 54	50. 5	15. 26	·1119					
21. 13	48. 0	15. 38	·1122					
21. 23	45. 30	15. 53	·1118					
21. 42	44. 10	16. 23	·1121					
22. 1	44. 30	16. 56	·1109					
22. 11	43. 0	17. 39	·1122					
22. 15	46. 0	18. 13	·1117					
22. 41	47. 10	18. 30	·1112					
22. 57	46. 5	18. 51	·1110					
23. 6	47. 0	19. 19	·1097					
23. 15	46. 10	19. 33	·1097					
23. 49	48. 30	20. 2	·1090					
23. 59	48. 35	20. 19	·1089					
		20. 32	·1097					
		20. 48	·1100					
		21. 18	·1098					
		21. 31	·1093					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	° ′ ″	Sept.19 h m		h m		h m	°	°
		22. 5	·1096					
		22. 19	·1093					
		22. 24	·1104					
		22. 32	·1100					
		22. 38	·1103					
		22. 53	·1093					
		23. 11	·1097					
		23. 15	·1093					
		23. 59	·1099					
Sept.20		Sept.20		Sept.20		Sept.20		
0. 0	20. 48. 35	0. 0	·1099	0. 0	·03490	0. 0	60·0	60·5
0. 15	49. 10	0. 17	·1100	0. 29	·03495	Max.	60·7	60·7
0. 31	48. 55	0. 30	·1094	1. 18	·03548	8. 30	60·7	60·7
0. 49	51. 5	0. 49	·1101	1. 33	·03544	18. 0	55·0	55·6
0. 57	50. 35	1. 6	·1101	3. 38:	·03580	Min.	53·3	52·7
1. 17	52. 30	1. 27	·1106	7. 17	·03478	21. 0	54·4	55·0
1. 37	50. 50	1. 48	·1089	7. 59	·03480			
2. 0	51. 10	2. 41	·1107	8. 53	·03440			
2. 23	49. 35	3. 38	·1111	9. 34	·03466			
3. 28	48. 30	3. 58	·1108	9. 58	·03475			
4. 17	46. 35	4. 17	·1110	11. 42	·03560			
5. 49	44. 0	4. 30	·1109	12. 17	·03529			
6. 45	43. 0	5. 8	·1109	14. 0	·03620			
7. 0	40. 35	5. 18	·1111	14. 30	·03619			
7. 29	32. 20	5. 27	·1111	18. 31	·03758			
7. 43	34. 10	5. 42	·1114		·03716			
8. 13	43. 50	6. 8	·1111	20. 28	·03784			
8. 30	44. 55	6. 29	·1111	22. 47	·03775			
8. 41	43. 15	7. 0	·1106	23. 40	·03755			
9. 0	38. 15	7. 18	·1100	23. 59	·03739			
9. 21	36. 50	7. 35	·1103					
9. 37	38. 10	7. 40	·1106					
9. 53	36. 10	7. 51	·1104					
10. 7	36. 5	7. 58	·1108					
10. 40	40. 10	8. 11	·1106					
11. 15	39. 25	8. 31	·1112					
11. 29	40. 0	8. 58	·1100					
11. 49	38. 35	9. 5	·1100					
12. 0	43. 0	9. 22	·1095					
12. 16	44. 20	9. 35	·1095					
12. 39	38. 5	9. 45	·1099					
12. 52	36. 15	10. 18	·1097					
13. 15	39. 5	10. 38	·1103					
13. 31	39. 15	11. 1	·1103					
14. 16	48. 40	11. 30	·1105					
14. 33	47. 10	11. 45	·1109					
14. 55	43. 10	11. 53	·1124					
15. 16	42. 55	12. 0	·1126					
15. 28	44. 40	12. 23	·1115					
16. 15	43. 35	12. 37	·1113					
17. 59	43. 30	13. 8	·1113					
18. 22	42. 10	13. 52	·1103					
18. 29	42. 35	14. 11	·1115					
19. 8	42. 10	14. 30	·1117					
19. 13	42. 55	15. 3	·1114					
19. 37	42. 35	15. 53	·1117					
19. 45	41. 30	17. 41	·1117					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept.20 h m	° ′ ″	Sept.20 h m		h m		h m	°	°
20. 8	20. 42. 35	18. 8	·1118					
20. 16	42. 15	18. 21	·1121					
20. 29	42. 55	18. 57	·1122					
20. 43	41. 50	19. 39	·1116					
21. 30	43. 30	20. 53	·1114					
22. 3	46. 0	21. 8	·1112					
22. 45	45. 35	21. 43	·1112					
22. 54	46. 45	22. 39	·1104					
23. 25	47. 5	23. 23	·1103					
23. 36	48. 35	23. 59	·1107					
23. 44	48. 15							
23. 59	49. 5							
Sept.21		Sept.21		Sept.21		Sept.21		
0. 0	20. 49. 5	0. 0	·1107	0. 0	·03739	1. 0	57·7	57·7
0. 28	51. 5	0. 27	·1105	2. 0	·03584	3. 0	59·5	59·0
0. 43	49. 30	0. 40	·1100	6. 38:	·03000	Max.	61·0	61·1
0. 53	49. 50	1. 0	·1100	10. 15	·02968	9. 0	59·7	59·2
1. 7	49. 0	1. 32	·1106	14. 23:	·03224	18. 0	54·8	55·0
1. 29	50. 0	1. 41	·1104	20. 17	·03719	Min.	53·0	52·4
1. 43	49. 15	1. 59	·1106	21. 14	·03780	21. 0	54·1	54·4
2. 17	49. 35	2. 16	·1107	23. 0	·03810			
2. 58	48. 5	2. 50	·1103		(†)			
4. 27	45. 40	3. 33	·1103					
4. 42	46. 10	3. 55	·1107					
5. 8	45. 15	4. 35	·1108					
5. 23	45. 50	4. 45	·1112					
6. 0	44. 20	5. 10	·1113					
6. 27	44. 25	5. 27	·1109					
6. 43	44. 0	6. 31	·1113					
7. 16	44. 30	6. 41	·1112					
8. 30	44. 10	7. 5	·1115					
9. 33	44. 15	7. 27	·1114					
9. 48	42. 0	8. 0	·1115					
10. 1	43. 0	8. 29	·1118					
10. 19	42. 5	9. 36	·1118					
10. 53	42. 30	9. 53	·1128					
11. 11	44. 15	10. 14	·1119					
11. 23	43. 10	10. 45	·1116					
11. 36	41. 0	11. 12	·1123					
11. 46	41. 55	12. 20	·1114					
11. 52	41. 5	12. 48	·1119					
12. 49	44. 50	13. 10	·1119					
13. 29	43. 10	13. 19	·1118					
13. 59	44. 40	13. 28	·1121					
14. 12	44. 0	13. 45	·1117					
14. 37	44. 25	13. 59	·1121					
15. 13	43. 50	14. 32	·1117					
15. 42	45. 5	15. 9	·1119					
16. 30	43. 45	15. 42	·1117					
17. 17	44. 5	16. 26	·1120					
18. 0	42. 30	16. 56	·1118					
18. 10	43. 15	17. 39	·1122					
18. 39	42. 0	18. 10	·1124					
19. 22	41. 25	18. 24	·1120					
19. 30	42. 5	19. 0	·1120					
19. 44	41. 20	20. 4	·1112					
19. 48	41. 50	20. 45	·1110					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Sept. 21 h m	° ′ ″
20. 8	20. 41. 15
20. 44	41. 15
21. 6	41. 30
22. 1	43. 30
23. 59	47. 30
Sept. 22	
0. 0	20. 47. 30
0. 55	48. 0
1. 17	47. 40
1. 49	48. 0
2. 12	47. 15
2. 34	47. 20
3. 0	46. 25
4. 38	45. 30
5. 17	44. 0
6. 5	43. 10
6. 17	44. 15
6. 26	43. 50
7. 46	44. 25
8. 56	42. 25
9. 1	40. 35
9. 6	43. 0
9. 14	41. 45
9. 28	41. 30
9. 43	38. 25
9. 59	31. 30
10. 26	36. 30
10. 37	37. 0
10. 53	40. 5
12. 0	39. 30
12. 26	40. 30
12. 54	39. 30
14. 0	41. 0
14. 13	39. 50
14. 22	40. 50
14. 42	39. 30
15. 3	40. 0
15. 31	39. 15
16. 3	42. 55
16. 32	43. 0
16. 39	43. 50
17. 8	41. 10
17. 28	41. 0
17. 39	42. 0
17. 52	42. 0
18. 10	43. 30
18. 21	47. 40
18. 36	49. 40
18. 43	49. 10
19. 0	52. 55
	***
19. 38	51. 35
19. 42	52. 25
19. 58	51. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 21 h m	
21. 22	·1111
21. 30	·1113
21. 40	·1111
22. 38	·1113
22. 45	·1112
22. 55	·1110
23. 9	·1109
23. 59	·1112
Sept. 22	
0. 0	·1112
0. 25	·1113
1. 21	·1110
1. 38	·1112
1. 58	·1112
	***
2. 21	·1110
2. 38	·1113
3. 10	·1107
4. 14	·1113
4. 43	·1113
5. 5	·1109
5. 32	·1110
5. 53	·1107
6. 13	·1112
6. 24	·1111
6. 55	·1111
7. 9	·1114
7. 36	·1115
7. 49	·1113
8. 10	·1116
8. 40	·1112
9. 0	·1112
9. 14	·1131
9. 25	·1132
9. 47	·1113
10. 1	·1121
10. 24	·1111
10. 38	·1114
10. 56	·1111
11. 57	·1118
13. 2	·1116
13. 30	·1119
15. 14	·1121
15. 26	·1122
15. 43	·1119
16. 8	·1120
16. 30	·1127
16. 54	·1130
17. 11	·1128
17. 38	·1130
18. 32	·1103
19. 5	·1117
19. 23	·1119
19. 47	·1113
20. 6	·1117
20. 15	·1116
	***

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 22 h m	
0. 21	·03580
1. 17	·03522
2. 49	·03330
4. 27	·03025
7. 2:	·02908
9. 18	·02903
9. 55	·02870
13. 49:	·03118
19. 5	·03747
20. 2	·03817
21. 38	·03865
23. 59	·03800

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 22 h m	°	°
1. 0	56·4	56·2
3. 0	59·2	58·9
Max.	62·2	63·0
9. 0	60·0	61·0
18. 0	53·4	54·0
Min.	51·2	50·4
21. 0	52·2	53·0
22. 0	53·0	53·2
23. 0	54·0	54·1

Greenwich Mean Solar Time.	Western Declination.
Sept. 22 h m	° ′ ″
20. 7	20. 51. 30
20. 10	52. 10
20. 34	48. 25
21. 5	47. 5
21. 38	50. 10
21. 52	49. 20
22. 2	51. 30
22. 23	51. 5
	***
23. 0	52. 15
23. 12	51. 0
23. 30	53. 45
23. 39	52. 55
23. 59	53. 25
Sept. 23	
0. 0	20. 53. 25
0. 3	54. 30
0. 9	53. 55
0. 15	54. 50
0. 22	54. 15
0. 50	54. 45
1. 28	53. 15
1. 39	55. 10
1. 53	52. 55
2. 15	50. 35
2. 34	48. 20
2. 52	47. 40
3. 0	48. 15
4. 1	48. 35
4. 32	48. 5
4. 41	47. 20
4. 47	47. 55
5. 2	47. 50
5. 13	46. 35
5. 34	48. 5
5. 48	47. 5
5. 54	47. 30
6. 0	46. 5
6. 11	46. 50
6. 23	38. 0
6. 35	32. 20
6. 42	32. 0
6. 46	29. 50
7. 2	37. 0
7. 28	40. 55
8. 0	37. 25
8. 18	38. 55
8. 36	37. 50
9. 0	29. 30
9. 8	29. 35
9. 23	32. 35
9. 32	31. 20
9. 48	28. 0
9. 56	30. 0
10. 5	29. 25
10. 22	35. 40
10. 36	34. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Sept. 22 h m	
20. 54	·1119
21. 30	·1124
21. 50	·1117
21. 57	·1120
22. 40	·1106
22. 54	·1106
23. 8	·1097
23. 21	·1105
23. 41	·1101
23. 59	·1101
Sept. 23	
0. 0	·1101
0. 33	·1100
1. 28	·1095
1. 41	·1101
2. 2	·1088
2. 21	·1088
2. 44	·1097
2. 55	·1096
3. 9	·1103
3. 48	·1105
4. 0	·1108
	***
4. 22	·1104
4. 37	·1112
4. 40	·1112
4. 52	·1116
5. 11	·1112
5. 25	·1115
5. 34	·1110
5. 47	·1096
5. 55	·1095
6. 10	·1101
6. 16	·1093
6. 26	·1097
6. 34	·1094
6. 43	·1099
6. 46	·1097
6. 52	·1104
	***
7. 45	·1079
8. 22	·1080
8. 28	·1085
8. 52	·1081
9. 8	·1079
9. 23	·1083
9. 32	·1074
9. 39	·1074
9. 47	·1082
9. 55	·1078
10. 8	·1080
10. 22	·1076
10. 45	·1094

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Sept. 23 h m	
0. 0	·03800
1. 37	·03585
4. 31	·03043
5. 56	·02960
6. 53	·02993
7. 53	·02946
8. 51	·02958
10. 25	·02935
10. 52	·02945
11. 25	·02923
12. 24	·02940
13. 0	·03005
13. 53	·03020
14. 15	·02893
14. 47	·02920
17. 38:	·03450
22. 15	·03846
23. 30	·03810
	·03777
23. 59	·03738

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 23 h m	°	°
0. 0	55·4	55·8
1. 0	56·5	56·7
2. 0	57·8	58·2
3. 0	59·0	59·0
6. 0	61·1	61·0
Max.	62·0	62·2
9. 0	60·0	60·0
12. 0	58·2	58·2
18. 0	54·8	55·5
Min.	52·3	51·6
21. 0	53·2	54·0
22. 0	53·6	54·2
23. 0	54·0	54·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.23		Sept.23						
h m	° ′ ″	h m		h m		h m	°	°
10. 44	20. 32. 0	10. 55	·1087					
10. 53	34. 5	11. 0	·1087					
11. 1	33. 30	11. 22	·1064					
11. 10	35. 20	11. 36	·1070					
11. 30	27. 15	11. 43	·1067					
11. 38	29. 10	11. 58	·1075					
12. 0	24. 10	12. 8	·1069					
12. 3	24. 0	12. 37	·1068					
12. 18	19. 25	13. 0	·1078					
12. 27	21. 0	13. 15	·1072					
12. 32	20. 30	13. 25	·1070					
13. 7	22. 50	13. 58	·1040					
13. 12	22. 30	14. 40	·1116					
13. 28	14. 55	14. 58	·1101					
13. 40	12. 25	15. 8	·1098					
13. 47	14. 50	15. 24	·1100					
14. 0	44. 0	16. 10	·1100					
14. 6	43. 15	16. 26	·1102					
	***	16. 38	·1107					
14. 13	45. 35	16. 43	·1106					
14. 48	24. 50	16. 58	·1107					
14. 58	35. 35	18. 0	·1102					
15. 19	33. 30	18. 17	·1104					
15. 40	38. 30	18. 30	·1102					
15. 59	40. 50	19. 17	·1104					
16. 7	40. 30	19. 40	·1100					
16. 15	41. 35	19. 53	·1103					
16. 34	40. 40	20. 28	·1101					
16. 41	42. 25	20. 37	·1099					
16. 58	41. 25	21. 6	·1097					
17. 1	42. 5	21. 24	·1101					
17. 10	41. 30	21. 43	·1099					
17. 23	42. 20	22. 0	·1098					
17. 40	41. 30	22. 13	·1100					
18. 6	42. 25	22. 35	·1100					
18. 20	41. 25		***					
18. 27	42. 35	23. 12	·1092					
18. 58	41. 35	23. 40	·1101					
19. 8	42. 5	23. 59	·1108					
19. 20	41. 20							
19. 25	42. 15							
19. 37	42. 30							
19. 45	41. 15							
20. 20	42. 10							
20. 32	43. 35							
20. 43	43. 5							
21. 40	44. 30							
22. 6	45. 30							
22. 23	46. 50							
22. 37	49. 35							
22. 45	48. 50							
22. 55	49. 35							
23. 7	49. 0							
23. 59	50. 30							
Sept.24		Sept.24		Sept.24		Sept.24		
0. 0	20. 50. 30	0. 0	·1108	0. 0	·03738	0. 0	54 ·7	55 ·0
0. 37	51. 0	0. 20	·1113		(†)	1. 0	55 ·5	55 ·8

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.24		Sept.24		Sept.24		Sept.24		
h m	° ′ ″	h m		h m		h m	°	°
1. 51	20. 49. 10	1. 34	·1120	1. 0	·03734*	2. 0	56 ·4	56 ·8
1. 58	49. 30	1. 50	·1119	1. 30	·03715	3. 0	57 ·3	57 ·7
2. 15	48. 25	2. 1	·1121	3. 2	·03616	Max.	59 ·1	59 ·2
2. 27	49. 15	2. 17	·1118	4. 16	·03490	9. 10	57 ·5	57 ·8
2. 47	49. 15	2. 35	·1125	4. 55	·03459	18. 45	52 ·9	53 ·5
2. 59	48. 55	2. 58	·1122	6. 44:	·03226	Min.	51 ·0	50 ·4
3. 12	49. 0	3. 13	·1126	8. 14	·03180	21. 0	52 ·3	53 ·3
3. 31	51. 30	3. 57	·1114	8. 47	·03222			
3. 49	49. 30	4. 15	·1082	9. 9	·03138			
3. 56	49. 45	4. 26	·1094	10. 27	·03223			
4. 7	48. 0	4. 41	·1077	10. 53	·03182			
4. 19	43. 45	4. 57	·1091	11. 27	·03224			
4. 36	47. 35	5. 23	·1100	11. 59	·03300			
4. 47	44. 30	5. 29	·1099	17. 24	·03665			
5. 23	48. 40	5. 51	·1107	19. 43:	·03855			
5. 30	48. 0	5. 59	·1106	23. 59	·03863			
6. 5	46. 20	6. 14	·1116					
6. 18	47. 5	6. 25	·1111					
6. 33	45. 40	6. 34	·1111					
6. 53	45. 15	6. 44	·1117					
7. 0	45. 45	6. 50	·1115					
7. 31	45. 30	6. 55	·1119					
7. 47	41. 35	7. 3	·1114					
7. 54	42. 0	7. 16	·1118					
7. 58	41. 15	7. 24	·1116					
8. 30	43. 25	7. 32	·1120					
8. 45	15. 0	7. 49	·1110					
9. 13	44. 0	8. 0	·1113					
	(†)	8. 24	·1094					
9. 25	45. 35	8. 57	·1189					
9. 33	41. 30	9. 26	·1101					
9. 38	42. 0	9. 32	·1102					
9. 56	37. 0	9. 41	·1092					
10. 7	38. 0	9. 59	·1102					
10. 26	35. 40	10. 15	·1102					
10. 35	37. 10	10. 28	·1115					
11. 7	29. 10	10. 50	·1092					
11. 13	30. 0	11. 11	·1089					
11. 32	38. 10	11. 24	·1094					
11. 49	34. 55	11. 57	·1123					
12. 32	40. 0	12. 12	·1113					
12. 42	41. 55	12. 22	·1114					
13. 1	40. 10	12. 30	·1111					
13. 13	43. 0	12. 38	·1111					
13. 29	43. 35	12. 47	·1108					
13. 56	41. 25	13. 0	·1111					
14. 9	42. 50	13. 8	·1108					
14. 22	42. 20	13. 41	·1104					
14. 30	44. 5	13. 52	·1108					
14. 45	43. 25	14. 8	·1108					
14. 58	44. 5	14. 45	·1117					
15. 15	40. 30	15. 2	·1113					
15. 44	43. 25	16. 12	·1116					
15. 58	43. 5	16. 23	·1121					
16. 6	42. 0	16. 42	·1118					
16. 22	42. 5	16. 49	·1114					
16. 30	43. 10	16. 54	·1118					
16. 36	42. 0	17. 4	·1120					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.24		Sept.24						
h m	° ′ ″	h m		h m		h m	°	°
16. 50	20. 40. 10	17. 28	·1115					
16. 53	41. 20	17. 58	·1099					
16. 58	41. 0	18. 8	·1108					
17. 1	42. 10	18. 13	·1101					
17. 10	41. 0	18. 22	·1112					
17. 18	40. 40	18. 25	·1108					
17. 53	43. 45	18. 30	·1114					
18. 7	42. 0	18. 40	·1112					
18. 15	44. 15	18. 54	·1119					
18. 22	42. 5		***					
18. 37	45. 30	19. 53	·1112					
18. 45	43. 30		***					
18. 55	44. 5	20. 20	·1115					
19. 13	42. 5	21. 0	·1110					
19. 28	42. 40		***					
19. 31	41. 30	21. 4	·1112					
19. 37	43. 0		***					
19. 46	44. 0	22. 7	·1111					
19. 53	42. 0	22. 17	·1116					
19. 58	42. 50	22. 30	·1105					
20. 3	41. 50	22. 37	·1115					
20. 19	43. 5	22. 41	·1106					
	***		(†)					
21. 2	42. 40							
21. 39	45. 15							
21. 54	45. 35							
22. 10	47. 0							
22. 18	49. 5							
22. 28	48. 5							
22. 32	50. 15							
22. 41	48. 5							
22. 46	49. 15							
22. 57	47. 55							
23. 12	50. 45							
23. 27	48. 10							
23. 43	50. 5							
23. 49	52. 0							
23. 59	50. 20							
Sept.25		Sept.25		Sept.25		Sept.25		
0. 0	20. 50. 20	0. 0	·1108	0. 0	·03863	1. 0	56·2	56·3
0. 17	50. 10	1. 29	·1117	1. 34:	·03708	3. 0	60·0	60·0
0. 53	51. 35	1. 51	·1118	3. 1	·03414	Max.	63·0	64·0
1. 18	50. 25	1. 57	·1108	3. 23	·03300	9. 0	62·8	63·0
1. 27	53. 25	2. 15	·1127	3. 52	·03212	18. 10	54·8	55·1
1. 44	53. 5	2. 30	·1115	4. 39	·02980	Min.	51·3	50·8
1. 52	51. 25	2. 37	·1112	5. 2	·02946	21. 0	53·1	54·6
2. 6	54. 50	2. 43	·1115	6. 30	·02895			
2. 19	55. 5	2. 54	·1107	6. 58	·02840			
2. 37	58. 30	3. 13	·1072	9. 8	·02810			
2. 49	58. 5	3. 23	·1075	9. 28	·02769			
3. 9	49. 0	3. 32	·1083	9. 39	·02790			
3. 24	48. 0	3. 39	·1086	10. 10	·02777			
3. 30	46. 40	3. 47	·1099	10. 52	·02798			
3. 45	48. 5		***	14. 2:	·03047			
4. 4	47. 5	4. 15	·1093	16. 54	·03383			
4. 14	47. 35	4. 40	·1106	17. 29	·03498			
4. 22	46. 55	5. 0	·1105	19. 53	·03817			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept.25		Sept.15		Sept.25				
h m	° ′ ″	h m		h m		h m	°	°
4. 35	20. 48. 45	5. 8	·1111	22. 58	·03860			
4. 51	48. 10	5. 15	·1111	23. 59	·03857			
5. 1	48. 45	5. 42	·1090					
5. 33	45. 15	6. 4	·1111					
5. 37	41. 0	6. 20	·1133					
5. 43	41. 0	6. 29	·1127					
5. 48	39. 5	6. 46	·1100					
5. 57	38. 15	6. 57	·1106					
6. 3	33. 45	7. 10	·1099					
6. 17	40. 5	7. 24	·1099					
6. 32	43. 25	7. 30	·1105					
6. 45	40. 25	7. 38	·1106					
6. 55	40. 30	7. 45	·1102					
7. 8	37. 50	7. 54	·1102					
7. 36	41. 0	8. 4	·1098					
7. 43	40. 35	8. 23	·1099					
7. 52	42. 5		(†)					
8. 27	41. 50	9. 0	·1118*					
8. 43	44. 10	9. 30	·1118					
8. 53	43. 15	9. 42	·1126					
9. 2	47. 35	10. 3	·1108					
9. 15	45. 0	10. 32	·1113					
9. 27	35. 50	10. 50	·1103					
9. 51	43. 30	11. 11	·1100					
10. 10	39. 25	11. 35	·1100					
10. 23	40. 45	11. 45	·1107					
10. 38	39. 0	12. 0	·1105					
11. 26	44. 10	12. 39	·1106					
12. 45	42. 50	12. 50	·1103					
13. 18	43. 55	13. 1	·1107					
13. 29	44. 55	13. 10	·1107					
13. 52	42. 10	13. 23	·1102					
14. 7	44. 0	13. 54	·1104					
14. 29	42. 0	14. 7	·1107					
14. 46	44. 0	14. 17	·1104					
15. 44	44. 15	14. 27	·1106					
15. 57	43. 5	14. 54	·1103					
16. 17	43. 45	15. 41	·1109					
16. 48	42. 0	16. 12	·1110					
17. 0	40. 0	16. 20	·1108					
17. 22	42. 5	16. 40	·1109					
17. 49	42. 50	17. 6	·1115					
18. 5	47. 15	17. 17	·1106					
18. 20	42. 40	17. 30	·1102					
18. 25	44. 30	17. 40	·1111					
18. 33	42. 50	17. 49	·1110					
18. 47	44. 5	17. 57	·1118					
18. 59	43. 5	18. 8	·1105					
19. 10	43. 30	18. 14	·1099					
19. 17	42. 40	18. 21	·1106					
19. 26	43. 50	18. 27	·1103					
	***	18. 33	·1109					
19. 58	44. 0	18. 39	·1105					
20. 13	42. 20	18. 53	·1104					
20. 33	43. 20	19. 24	·1112					
20. 41	42. 40	19. 41	·1112					
20. 52	43. 55	19. 46	·1105					
21. 1	43. 25	20. 0	·1110					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 25		Sept. 25						
h m	° ′ ″	h m		h m		h m	°	°
21. 48	20. 45. 0	20. 11	·1105					
21. 59	44. 30	20. 25	·1108					
22. 57	48. 25	20. 43	·1106					
23. 1	49. 35	20. 55	·1109					
23. 13	48. 10	21. 5	·1105					
23. 25	49. 30	21. 48	·1103					
23. 45	48. 0	21. 54	·1106					
23. 47	49. 25		***					
23. 52	48. 35	23. 20	·1105					
23. 59	49. 0	23. 28	·1100					
		23. 59	·1110					
Sept. 26		Sept. 26		Sept. 26		Sept. 26		
0. 0	20. 49. 0	0. 0	·1110	0. 0	·03857	1. 0	56 ·4	56 ·2
0. 30	49. 35	0. 40	·1109	0. 43	·03823	3. 0	59 ·5	59 ·2
1. 5	50. 30	0. 56	·1106	1. 22	·03760	Max.	61 ·4	61 ·8
	***	1. 7	·1114	3. 46	·03308	9. 0	60 ·3	60 ·1
1. 45	47. 55	1. 26	·1108	6. 17	·02918	Min.	50 ·2	49 ·6
2. 0	49. 35	1. 45	·1110	7. 0	·02900	21. 24	51 ·0	53 ·0
2. 8	48. 10	1. 59	·1116	7. 16	·02914			
2. 22	48. 45	2. 10	·1111	8. 22	·02883			
2. 44	48. 5	2. 26	·1114	9. 58	·02881			
2. 53	49. 5	2. 51	·1113	12. 45	·02983			
3. 0	47. 45	2. 53	·1116	15. 42:	·03257			
3. 13	46. 40	3. 8	·1105	20. 12	·03864			
3. 19	47. 20	3. 23	·1109	22. 0	·03925			
3. 30	46. 30	3. 46	·1095	23. 59	·03912			
3. 37	44. 25	4. 0	·1095					
3. 51	44. 10	4. 14	·1102					
4. 8	41. 30	4. 23	·1102					
4. 20	42. 35	4. 33	·1095					
4. 34	41. 35	4. 53	·1097					
4. 44	43. 0	5. 8	·1106					
5. 3	41. 5	5. 14	·1106					
5. 14	41. 20	5. 23	·1111					
5. 29	44. 0	5. 33	·1112					
6. 1	44. 15	5. 47	·1110					
6. 16	43. 20	6. 29	·1112					
6. 26	44. 0	6. 43	·1108					
6. 43	39. 25	6. 55	·1097					
7. 0	28. 55	7. 11	·1116					
7. 13	32. 40	7. 20	·1114					
7. 41	38. 50	8. 8	·1115					
8. 1	38. 30	8. 34	·1112					
8. 15	39. 10	9. 7	·1102					
8. 30	38. 15	9. 31	·1112					
9. 0	39. 50	9. 56	·1113					
9. 11	39. 0	10. 6	·1115					
9. 23	40. 30	10. 12	·1114					
9. 49	40. 30	10. 24	·1116					
9. 59	39. 20	11. 0	·1107					
10. 12	41. 10	11. 37	·1110					
10. 17	40. 0	11. 46	·1108					
10. 33	41. 55	12. 9	·1112					
10. 48	41. 40	13. 50	·1110					
12. 0	44. 20	14. 15	·1114					
12. 12	46. 0	15. 0	·1112					
12. 54	42. 35	15. 44	·1113					
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 26		Sept. 26						
h m	° ′ ″	h m		h m		h m	°	°
13. 58	20. 45. 10	16. 10	·1118					
	***	16. 17	·1116					
15. 0	43. 0	16. 38	·1120					
16. 7	45. 5	16. 45	·1118					
16. 23	44. 10	16. 55	·1120					
16. 38	44. 50	17. 4	·1118					
16. 52	43. 45	17. 11	·1120					
17. 4	44. 35	17. 40	·1116					
17. 10	43. 15	18. 0	·1116					
17. 15	44. 20	18. 31	·1119					
17. 33	43. 0	18. 39	·1115					
17. 40	44. 15	18. 58	·1117					
18. 7	43. 20	19. 52	·1113					
18. 15	44. 25	19. 59	·1111					
18. 27	43. 25	20. 23	·1111					
18. 40	44. 15	20. 59	·1102					
18. 45	42. 40	21. 16	·1088					
20. 0	42. 25	21. 25	·1085					
20. 18	43. 0	21. 43	·1085					
20. 37	45. 0	21. 52	·1092					
21. 0	44. 55		(†)					
21. 15	46. 0	23. 0	·1102					
21. 28	45. 30	23. 38	·1103					
21. 43	47. 35	23. 46	·1108					
21. 54	46. 55	23. 59	·1110					
	(†)							
Sept. 27		Sept. 27		Sept. 27		Sept. 27		
	(†)	0. 0	·1110	0. 0	·03912	Max.	57 ·0	58 ·8
5. 51	20. 46. 50	0. 25	·1117	0. 41	·03900	9. 30	57 ·0	57 ·0
6. 14	45. 0	0. 37	·1115	2. 59	·03775	18. 0	56 ·8	56 ·8
6. 26	45. 15	1. 25	·1123	4. 45	·03602	Min.	55 ·6	55 ·4
6. 38	44. 0	1. 41	·1116	10. 26	·03160	21 ·0	56 ·5	56 ·6
6. 46	40. 5	2. 0	·1120	10. 58	·03160			
7. 2	34. 50	2. 30	·1120	13. 54	·03100			
7. 25	33. 40	2. 45	·1110	16. 21	·03025			
7. 32	32. 10	2. 51	·1121	17. 1	·03020			
7. 44	33. 5	3. 27	·1124	18. 0	·03057			
7. 56	36. 55	3. 52	·1115	21. 3	·03058			
8. 11	36. 35	4. 33	·1115	23. 59	·02977			
8. 20	39. 25	5. 25	·1128					
8. 33	41. 20	5. 45	·1116					
8. 39	40. 50	6. 12	·1117					
8. 58	41. 45	6. 25	·1120					
9. 8	40. 50	6. 36	·1117					
9. 30	40. 50	7. 8	·1124					
9. 45	44. 30	7. 20	·1131					
9. 57	43. 30		(†)					
10. 8	48. 30	9. 30	·1130					
10. 16	42. 0	16. 45	·1114					
10. 30	39. 0	17. 28	·1112					
10. 52	40. 45	17. 57	·1112					
11. 1	39. 50	18. 8	·1116					
11. 18	43. 5	18. 20	·1113					
11. 25	42. 30	18. 37	·1113					
11. 36	43. 45	19. 15	·1110					
11. 55	42. 10	20. 38	·1108					
12. 0	40. 40	21. 28	·1110					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 27		Sept. 27						
h m	° ′ ″	h m		h m		h m	°	°
12. 11	20. 42. 25	21. 47	·1108					
12. 55	43. 55	22. 8	·1109					
13. 14	43. 0		(†)					
13. 27	44. 25							
13. 36	44. 5							
13. 44	45. 20							
14. 15	44. 15							
14. 29	45. 40							
14. 44	48. 5							
15. 2	50. 55							
15. 22	44. 30							
15. 44	47. 25							
15. 58	44. 0							
16. 15	42. 5							
17. 4	41. 15							
	(†)							
21. 0	42. 29*							
23. 37	46. 50							
23. 43	49. 10							
23. 59	48. 10							
Sept. 28		Sept. 28		Sept. 28		Sept. 28		
0. 0	20. 48. 10		(†)	0. 0	·02977	1. 0	58·2	58·1
0. 42	49. 0	1. 0	·1124*	3. 42	·02960	3. 0	59·2	59·0
1. 0	52. 35	1. 6	·1124	7. 10	·02836	Max.	61·0	61·2
1. 10	51. 35	1. 14	·1117	9. 30	·02865	9. 0	59·2	59·2
1. 27	52. 20	1. 28	·1120	9. 51	·02856	18. 0	52·0	53·0
1. 37	50. 35	1. 40	·1110	12. 16	·02974	Min.	49·0	48·4
1. 47	50. 25	2. 8	·1106	13. 15	·03125	21. 0	50·7	51·3
1. 52	49. 30	2. 19	·1113	13. 31	·03150			
1. 59	50. 20	2. 32	·1108	18. 37	·03850			
2. 4	49. 20	3. 18	·1112	18. 59	{·03862			
2. 15	51. 25	3. 30	·1108		{·03604			
2. 40	49. 5	4. 8	·1115	21. 28	·03881			
3. 49	47. 35	4. 25	·1112	22. 11	·03890			
4. 1	48. 5	5. 21	·1111		(†)			
4. 17	47. 5	5. 40	·1114	23. 21	·03730			
4. 38	47. 0	6. 4	·1111	23. 59	·03706			
5. 14	45. 40	6. 27	·1114					
5. 29	45. 50	6. 39	·1113					
5. 44	44. 10	7. 8	·1118					
6. 7	44. 35	7. 22	·1117					
6. 15	44. 10	7. 30	·1118					
6. 23	44. 50	8. 18	·1112					
6. 42	44. 10	8. 37	·1114					
7. 2	45. 0	9. 1	·1108					
7. 43	44. 55	9. 27	·1141					
8. 7	44. 0	9. 59	·1113					
8. 20	44. 15	10. 7	·1111					
9. 3	41. 50	10. 28	·1099					
9. 22	32. 0	10. 52	·1118					
9. 30	34. 40	11. 38	·1124					
9. 56	34. 0	12. 1	·1115					
10. 13	40. 25	12. 19	·1103					
10. 30	41. 50	12. 28	·1102					
10. 51	38. 30	13. 8	·1109					
11. 53	37. 0	13. 18	·1115					
12. 7	35. 35	13. 43	·1113					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 28		Sept. 28						
h m	° ′ ″	h m		h m		h m	°	°
12. 52	20. 40. 5	14. 17	·1114					
13. 16	43. 30	14. 40	·1116					
13. 38	41. 10	15. 39	·1118					
14. 0	44. 0	16. 28	·1123					
14. 20	42. 55	18. 45	·1120					
14. 42	44. 0	18. 59	·1121					
15. 4	41. 45	19. 45	·1118					
15. 22	43. 30	20. 4	·1114					
15. 36	42. 10	21. 10	·1110					
15. 54	43. 40		***					
18. 6	42. 10	21. 55	·1112					
18. 37	43. 30	23. 38	·1116					
19. 23	40. 45	23. 59	·1111					
19. 28	42. 0							
19. 31	40. 45							
19. 38	41. 25							
19. 44	40. 10							
20. 18	43. 5							
20. 49	44. 0							
20. 57	45. 0							
21. 29	43. 55							
21. 37	44. 50							
21. 44	43. 55							
21. 48	45. 25							
21. 55	44. 45							
22. 24	46. 0							
22. 28	47. 5							
22. 42	46. 20							
22. 52	47. 35							
23. 25	49. 30							
23. 32	50. 30							
23. 59	48. 35							
Sept. 29		Sept. 29		Sept. 29		Sept. 29		
0. 0	20. 48. 35	0. 0	·1111	0. 0	·03706	1. 0	54·8	55·0
0. 38	51. 40	0. 39	·1121	1. 7:	·03610	3. 0	58·0	57·0
0. 58	51. 0	1. 0	·1118	2. 8	·03398	Max.	61·0	62·0
1. 18	51. 55	1. 22	·1125	4. 7	·02962	9. 0	60·0	59·0
1. 38	51. 5	1. 40	·1123	7. 21:	·02836	18. 0	52·0	53·0
1. 47	49. 40	1. 51	·1119	9. 33	·02824	Min.	48·3	47·6
2. 0	49. 25	2. 8	·1123	9. 59	·02840	21. 0	50·0	51·0
2. 6	50. 45	2. 26	·1116	10. 28	·02830	22. 0	50·0	50·8
2. 17	48. 5	2. 47	·1124	12. 41	·02963	23. 0	50·7	51·2
2. 38	47. 0	3. 1	·1119	14. 17	·03130			
2. 48	47. 5	3. 30	·1121	18. 14	·03680			
3. 0	45. 5	4. 13	·1112		(†)			
3. 18	44. 35	4. 36	·1117	20. 55	·03920			
3. 52	45. 45	5. 19	·1116	21. 45	·03940			
4. 12	44. 35	6. 8	·1118		(†)			
6. 22	43. 40	6. 59	·1116					
6. 48	42. 45	7. 50	·1120					
7. 7	43. 0	8. 8	·1114					
8. 32	42. 40	8. 25	·1113					
8. 56	38. 55	9. 2	·1117					
9. 4	41. 25	9. 24	·1113					
9. 18	41. 55	9. 42	·1120					
9. 38	37. 0	9. 50	·1118					
10. 9	42. 35	10. 2	·1131					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. of H. F. Magnet.	of V. F. Magnet.
Sept.29		Sept.29						
h m	° ′ ″	h m		h m		h m	°	°
10. 22	20. 41. 10	10. 30	·1116					
10. 55	40. 5	10. 50	·1117					
11. 19	41. 5	11. 30	·1115					
11. 25	42. 10	12. 8	·1116					
12. 6	41. 40	12. 53	·1115					
12. 20	42. 25	13. 8	·1116					
12. 38	40. 25	13. 26	·1113					
12. 52	40. 25	14. 0	·1128					
13. 29	46. 35	14. 27	·1122					
13. 43	45. 30	15. 46	·1122					
14. 9	44. 50	16. 6	·1126					
14. 23	41. 45	16. 22	·1124					
15. 18	41. 40	17. 6	·1121					
15. 52	42. 30		(†)					
16. 13	40. 25	18. 55	·1121					
16. 35	41. 10	20. 17	·1113					
16. 47	40. 30	20. 39	·1115					
17. 19	41. 10	21. 6	·1112					
17. 38	43. 10	21. 45	·1111					
18. 13	43. 0	21. 58	·1112					
18. 31	41. 30	22. 22	·1110					
18. 39	42. 50	22. 43	·1116					
18. 51	41. 45	23. 26	·1109					
18. 54	42. 25	23. 59	·1115					
19. 11	40. 20							
19. 17	40. 45							
19. 31	40. 0							
19. 39	40. 15							
20. 28	39. 50							
21. 3	40. 35							
21. 13	40. 10							
21. 27	41. 50							
21. 57	43. 15							
22. 3	44. 45							
22. 9	44. 10							
	***							
22. 34	46. 0							
22. 42	48. 0							
23. 9	48. 5							
23. 41	49. 35							
23. 59	49. 5							
Sept.30		Sept.30		Sept.30		Sept.30		
0. 0	20. 49. 5	0. 0	·1115		(†)	0. 0	52 ·0	52 ·6
0. 10	49. 55	0. 49	·1119	1. 0	·03854	1. 0	53 ·5	54 ·0
0. 19	50. 5	1. 7	·1116	2. 21	·03543	2. 0	56 ·3	56 ·6
0. 34	49. 20	1. 25	·1119	4. 35	·02946	3. 0	57 ·6	58 ·0
0. 44	49. 30	1. 44	·1111	4. 57	·02950	6. 0	61 ·0	61 ·0
1. 0	48. 35	2. 3	·1110	6. 4	·02894	Max.	61 ·7	62 ·5
1. 19	49. 30	2. 32	·1116	9. 16	·02806	9. 0	61 ·5	61 ·5
1. 30	48. 20	3. 7	·1115	10. 12	·02807	12. 0	61 ·5	61 ·6
1. 43	46. 15	3. 13	·1121	11. 0	·02770	18. 0	60 ·7	60 ·7
1. 53	46. 50	3. 39	·1116	18. 23	·02792	Min.	58 ·2	57 ·8
2. 14	45. 25	3. 47	·1117	22. 28	·02860	21. 0	59 ·8	60 ·0
2. 24	46. 20	3. 54	·1114	23. 59	·02805	22. 0	60 ·3	60 ·2
3. 1	45. 30	4. 19	·1110			23. 0	60 ·6	60 ·6
3. 54	45. 20	4. 24	·1105					
4. 19	43. 55	4. 37	·1102					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. of H. F. Magnet.	of V. F. Magnet.
Sept.30		Sept.30						
h m	° ′ ″	h m		h m		h m	°	°
4. 28	20. 44. 5	4. 45	·1094					
4. 51	37. 5	5. 8	·1113					
5. 7	40. 50	5. 43	·1115					
5. 48	43. 0	5. 50	·1114					
6. 1	42. 10	6. 39	·1115					
6. 7	42. 25	6. 49	·1112					
6. 39	41. 45	7. 9	·1119					
6. 45	40. 40	7. 32	·1103					
7. 2	39. 10	7. 47	·1114					
7. 13	40. 10	7. 57	·1109					
7. 27	36. 30	8. 8	·1116					
7. 37	42. 20	8. 17	·1113					
7. 52	35. 0	8. 43	·1113					
8. 0	32. 0	9. 2	·1117					
8. 37	40. 5	9. 14	·1115					
9. 8	39. 30	9. 44	·1113					
9. 24	38. 0	9. 58	·1107					
9. 59	39. 55	10. 10	·1119					
10. 10	38. 10	10. 19	·1118					
10. 20	41. 30	10. 37	·1136					
10. 37	37. 0	11. 0	·1116					
10. 52	39. 30	11. 11	·1112					
11. 2	36. 45	11. 19	·1121					
11. 24	37. 30	11. 28	·1117					
11. 27	41. 5	11. 42	·1117					
11. 34	39. 25	11. 53	·1124					
11. 40	40. 45	12. 17	·1112					
11. 56	39. 10	12. 30	·1114					
12. 1	40. 40	13. 8	·1115					
12. 27	37. 10	13. 39	·1106					
13. 1	39. 40	13. 48	·1110					
13. 14	38. 55	14. 7	·1109					
13. 30	41. 15	14. 19	·1113					
13. 46	41. 5	14. 54	·1109					
14. 8	43. 30	15. 25	·1113					
14. 41	39. 40	15. 46	·1112					
15. 14	44. 0	16. 23	·1116					
15. 30	43. 10	17. 8	·1115					
16. 2	43. 35	17. 17	·1117					
16. 22	42. 50	17. 25	·1115					
17. 2	42. 30	17. 35	·1115					
17. 11	43. 20	17. 41	·1116					
17. 27	42. 0	17. 53	·1113					
17. 38	43. 5	18. 10	·1116					
17. 56	41. 20	18. 38	·1107					
18. 37	40. 45	19. 11	·1106					
	***	19. 36	·1107					
19. 30	43. 5	20. 18	·1105					
20. 3	41. 50	20. 54	·1098					
20. 23	42. 25	21. 15	·1098					
20. 37	41. 45	21. 30	·1100					
20. 46	42. 0	21. 43	·1098					
	***	21. 50	·1104					
21. 30	44. 35	22. 8	·1095					
21. 41	46. 30	22. 42	·1098					
21. 55	45. 5	22. 54	·1096					
22. 13	45. 40	23. 38	·1101					
22. 30	47. 15	23. 59	·1097					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 30								
h m	° ′ ″	h m		h m		h m	°	°
22. 47	20. 47. 10							
23. 53	49. 45							
23. 59	49. 10							
Oct. 1		Oct. 1		Oct. 1		Oct. 1		
0. 0	20. 49. 10	0. 0	·1097	0. 0	·02805	0. 0	61 ·1	61 ·1
	***	0. 15	·1101	0. 37	·02780	1. 0	61 ·8	61 ·3
0. 16	51. 25	0. 42	·1097	1. 3	·02793	2. 0	62 ·2	62 ·1
0. 23	50. 40	1. 20	·1109	1. 40	·02776	3. 0	62 ·7	62 ·8
	***	1. 43	·1101	2. 13	·02791	Max.	63 ·2	63 ·8
0. 45	50. 25	1. 52	·1103	4. 13	·02755	9. 0	62 ·5	64 ·0
0. 59	50. 50	1. 59	·1098		·02880	18. 0	57 ·8	58 ·0
1. 21	53. 30	2. 15	·1104	6. 20	·02794	Min.	55 ·6	55 ·1
1. 38	51. 30	2. 47	·1101	9. 23:	·02765	21. 0	56 ·9	57 ·0
1. 45	51. 55	2. 58	·1098	13. 28	·02976			
1. 51	51. 0	3. 15	·1102	18. 12	·03350			
1. 59	50. 25	3. 28	·1101	22. 1	·03538			
2. 9	52. 25	4. 8	·1103	23. 59	·03550			
3. 8	48. 30	4. 21	·1105					
3. 14	49. 5	4. 36	·1102					
3. 27	48. 0	4. 52	·1105					
4. 7	46. 25	5. 7	·1103					
5. 16	44. 45	5. 39	·1109					
5. 36	44. 30	5. 47	·1104					
5. 47	42. 40	5. 59	·1107					
6. 0	42. 35	6. 18	·1098					
6. 20	38. 50	6. 34	·1106					
6. 37	41. 25	8. 34	·1109					
6. 54	40. 10	9. 5	·1106					
7. 3	40. 0	9. 40	·1109					
7. 15	41. 35	9. 51	·1108					
7. 24	42. 5	10. 22	·1110					
7. 30	41. 35	11. 52	·1110					
7. 46	42. 55	12. 0	·1112					
8. 1	42. 20	12. 14	·1109					
8. 10	43. 15	12. 30	·1111					
8. 27	42. 25	12. 42	·1111					
8. 38	43. 5	13. 0	·1118					
9. 30	43. 5	13. 26	·1111					
10. 13	43. 15	14. 5	·1111					
11. 15	42. 40	14. 19	·1110					
12. 0	42. 55	14. 53	·1114					
13. 9	41. 55	15. 8	·1112					
13. 22	42. 15	15. 23	·1113					
13. 39	40. 20	15. 32	·1111					
14. 6	41. 30	15. 43	·1114					
14. 18	40. 35	16. 0	·1109					
14. 58	41. 45	16. 28	·1112					
15. 28	41. 20	17. 0	·1103					
15. 48	41. 55	17. 42	·1113					
15. 53	43. 0	17. 58	·1113					
16. 8	41. 15	18. 22	·1118					
16. 36	41. 30	19. 0	·1111					
16. 46	41. 0	19. 53	·1108					
16. 55	43. 0	20. 56	·1099					
17. 49	44. 30	21. 52	·1095					
18. 6	43. 30	22. 19	·1094					
18. 13	43. 40	22. 30	·1090					
Oct. 1		Oct. 1						
h m	° ′ ″	h m		h m		h m	°	°
18. 33	20. 42. 0	22. 43	·1093					
18. 56	42. 30	22. 52	·1091					
19. 45	41. 10	23. 23	·1093					
19. 59	41. 40	23. 42	·1099					
20. 4	41. 5	23. 53	·1095					
20. 36	40. 20	23. 59	·1096					
21. 8	40. 55							
21. 57	42. 55							
22. 19	44. 15							
22. 24	44. 0							
22. 38	46. 5							
22. 45	45. 10							
23. 46	50. 30							
23. 56	49. 0							
23. 59	50. 30							
Oct. 2		Oct. 2		Oct. 2		Oct. 2		
0. 0	20. 50. 30	0. 0	·1096	0. 0	·03550	1. 0	58 ·4	58 ·5
0. 8	49. 45	0. 14	·1096	0. 51	·03533	3. 0	59 ·8	60 ·0
0. 22	51. 10	0. 24	·1101		·03474	Max.	60 ·6	60 ·5
0. 26	52. 0	0. 55	·1104	5. 24:	·03160	9. 0	60 ·3	60 ·0
0. 37	51. 30	1. 4	·1102	8. 45	·03054	18. 0	58 ·2	58 ·3
0. 45	52. 25	1. 25	·1102	11. 12	·03049	Min.	57 ·1	56 ·8
0. 55	52. 15	2. 18	·1108	12. 16	·03023	21. 0	58 ·0	58 ·0
1. 8	50. 30			14. 11	·03057			
2. 33	49. 35	3. 8	·1110	20. 38:	·03180			
4. 23	45. 30		***	22. 10	·03176			
5. 12	45. 30	4. 19	·1108	23. 59	·03095			
5. 29	44. 50							
6. 17	44. 45	6. 8	·1113					
7. 3	43. 55	6. 16	·1112					
8. 10	43. 35	8. 14	·1113					
8. 23	43. 0	9. 1	·1109					
8. 55	43. 50	9. 18	·1116					
9. 13	39. 40	9. 30	·1117					
10. 7	43. 0	9. 49	·1111					
10. 54	42. 10	10. 26	·1108					
10. 59	44. 25	10. 40	·1111					
11. 16	41. 10	10. 58	·1110					
11. 29	40. 0	11. 12	·1117					
11. 43	38. 30	11. 19	·1114					
12. 0	42. 30	11. 41	·1129					
12. 15	41. 25	11. 53	·1126					
12. 37	44. 35	12. 9	·1113					
13. 9	42. 10	12. 32	·1106					
13. 28	43. 0	12. 49	·1113					
13. 55	40. 25	13. 13	·1116					
14. 30	43. 5	14. 10	·1109					
15. 3	42. 45	15. 10	·1110					
15. 17	43. 15	17. 14	·1115					
15. 29	42. 20	17. 33	·1113					
16. 12	43. 30	18. 13	·1113					
16. 37	43. 15	18. 23	·1111					
17. 0	44. 0	19. 30	·1106					
17. 5	43. 5	21. 5	·1092					
17. 45	42. 50	21. 25	·1095					
17. 54	42. 0	22. 0	·1090					
18. 53	42. 0	22. 56	·1091					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 2		Oct. 2						
h m	° ′ ″	h m		h m		h m	°	°
19. 46	20 40. 15	23. 59	·1098					
20. 53	40. 35							
22. 5	44. 0							
23. 16	47. 50							
23. 59	48. 25							
Oct. 3		Oct. 3		Oct. 3		Oct. 3		
0. 0	20. 48. 25	0. 0	·1098	0. 0	·03095	1. 0	59·8	60·0
0. 54	48. 5	0. 36	·1102	3. 8	·02935	3. 0	61·0	61·0
2. 0	46. 35	3. 1	·1109	4. 38	·02826	Max.	61·8	62·0
3. 25	43. 55	3. 31	·1108	9. 32	·02763	9. 0	61·8	62·0
3. 32	44. 20	3. 44	·1110	20. 0	·02750	Min.	60·8	60·7
4. 20	43. 0	3. 49	·1099	22. 30	·02723	21. 56	62·0	62·0
5. 1	42. 55	5. 12	·1099	23. 23	·02727			
5. 55	43. 25	5. 36	·1112	23. 59	·02707			
7. 37	43. 5	5. 45	·1111					
7. 48	42. 30	7. 34	·1113					
8. 29	43. 5	8. 0	·1112					
8. 48	41. 30	9. 8	·1113					
9. 24	43. 5	9. 30	·1110					
9. 48	42. 30	10. 41	·1110					
10. 45	42. 30	10. 48	·1111					
10. 58	43. 0	11. 6	·1110					
11. 22	42. 45	16. 6	·1108					
14. 22	42. 30	16. 53	·1111					
17. 27	43. 0	17. 23	·1110					
17. 46	42. 10	18. 10	·1110					
18. 15	43. 0	20. 43	·1096					
20. 1	40. 20	21. 18	·1091					
20. 11	41. 15	21. 54	·1088					
20. 19	40. 40	22. 17	·1091					
21. 52	42. 0	22. 27	·1088					
22. 23	44. 20		(†)					
22. 51	45. 10	23. 43	·1089					
23. 15	46. 55	23. 53	·1090					
23. 28	46. 15	23. 59	·1089					
23. 48	48. 35							
23. 59	48. 20							
Oct. 4		Oct. 4		Oct. 4		Oct. 4		
0. 0	20. 48. 20	0. 0	·1089	0. 0	·02707	1. 0	63·0	63·2
0. 48	49. 15	0. 7	·1088	2. 8	·02676	Max.	64·0	64·2
1. 13	48. 30	1. 21	·1095	2. 38	·02683	9. 0	64·0	64·2
1. 33	49. 20	2. 3	·1099	3. 24	·02679	18. 0	57·7	58·5
2. 8	48. 10	2. 38	·1099		·02875	Min.	53·5	52·7
2. 54	46. 5	3. 28	·1103	6. 8	·02735	21. 0	55·0	56·0
4. 5	44. 0	4. 25	·1103	8. 15	·02692			
4. 49	49. 0	4. 37	·1105	10. 21	·02700			
6. 51	43. 10	5. 20	·1102	10. 35	·02718			
9. 0	43. 40	5. 53	·1107	10. 55	·02710			
9. 24	41. 45	8. 2	·1110	13. 25	·02834			
9. 37	41. 35	9. 1	·1108	16. 17	·03098			
9. 52	38. 35	9. 27	·1113	20. 2	·03647			
10. 4	38. 0	9. 38	·1111	23. 59	·03708			
10. 23	38. 25	9. 55	·1124					
10. 41	45. 25	10. 25	·1107					
10. 54	42. 0	10. 37	·1116					
11. 13	40. 25	11. 0	·1114					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 4		Oct. 4						
h m	° ′ ″	h m		h m		h m	°	°
11. 30	20. 41. 0	11. 34	·1105					
12. 4	42. 25	12. 25	·1108					
12. 32	40. 10	13. 3	·1106					
12. 59	39. 30	13. 24	·1116					
13. 20	40. 5	13. 56	·1107					
13. 45	43. 15	14. 17	·1114					
14. 16	40. 5	14. 43	·1108					
14. 30	39. 35	15. 8	·1112					
14. 46	41. 10	15. 28	·1109					
15. 25	38. 0	16. 5	·1109					
16. 38	40. 40	17. 45	·1116					
18. 45	41. 15	18. 27	·1116					
18. 56	40. 30	20. 13	·1107					
20. 13	39. 35	21. 8	·1102					
21. 26	41. 15	21. 29	·1103					
21. 46	41. 30	21. 56	·1099					
22. 15	44. 0	22. 5	·1100					
22. 31	44. 10	22. 38	·1098					
22. 41	45. 20	22. 55	·1099					
23. 49	46. 30	23. 59	·1100					
23. 59	47. 10							
Oct. 5		Oct. 5		Oct. 5		Oct. 5		
0. 0	20. 47. 10	0. 0	·1100	0. 0	·03708	1. 0	56·0	56·9
0. 17	48. 35	0. 24	·1105	1. 44	·03686	3. 0	58·3	58·3
1. 7	47. 30	0. 47	·1103	5. 1	·03470	Max.	59·0	59·6
2. 1	48. 40	1. 48	·1107	8. 8	·03417	9. 0	58·8	59·0
2. 20	47. 30	2. 19	·1116	8. 23	·03403	18. 0	53·9	54·8
4. 2	46. 20	2. 35	·1112	9. 23	·03406	Min.	50·4	49·6
4. 22	45. 45	2. 55	·1112	11. 59	·03446	21. 0	51·8	53·0
5. 31	45. 10	3. 10	·1111	14. 53	·03545			
5. 42	46. 5	4. 7	·1113	18. 29	·03800			
5. 58	45. 5	4. 22	·1110	20. 53	·03808			
6. 46	45. 30	4. 39	·1114	21. 43	·03830			
7. 5	46. 50	4. 47	·1113	23. 59	·03830			
7. 27	45. 0	5. 14	·1112					
7. 45	42. 55	5. 39	·1116					
8. 8	43. 0	5. 57	·1112					
8. 22	35. 0	6. 17	·1112					
8. 58	37. 45	6. 24	·1116					
9. 7	36. 10	6. 38	·1113					
9. 30	38. 55	7. 0	·1113					
9. 43	38. 20	7. 11	·1110					
9. 56	39. 25	7. 45	·1109					
10. 7	39. 20	8. 16	·1119					
10. 26	41. 10	8. 30	·1126					
10. 51	40. 30	9. 13	·1116					
11. 0	41. 35	9. 23	·1120					
11. 17	39. 0	10. 4	·1112					
11. 48	41. 45	10. 28	·1114					
12. 13	39. 10	10. 38	·1114					
12. 45	39. 0	10. 52	·1120					
13. 12	39. 35	11. 8	·1115					
13. 40	39. 0	12. 8	·1117					
14. 14	39. 35	12. 32	·1114					
14. 57	39. 30	14. 36	·1118					
15. 47	41. 5	14. 52	·1118					
15. 59	40. 20	16. 13	·1120					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 5		Oct. 5						
h m	° ′ ″	h m		h m		h m	°	°
16. 37	20. 42. 20	16. 43	·1123					
17. 8	42. 0	17. 11	·1122					
18. 57	43. 25	18. 3	·1124					
20. 52	43. 20	19. 58	·1116					
21. 8	41. 45	21. 4	·1111					
21. 27	43. 35	21. 37	·1111					
22. 58	48. 10	22. 21	·1105					
23. 7	47. 55	23. 45	·1106					
23. 59	49. 15	23. 59	·1107					
Oct. 6		Oct. 6		Oct. 6		Oct. 6		
0. 0	20. 49. 15	0. 0	·1107	0. 0	·03830	1. 0	54·0	54·0
0. 11	49. 45	1. 12	·1112	2. 50:	·03662	3. 0	56·1	56·2
0. 20	49. 10	1. 47	·1111	6. 31	·03239	Max.	58·5	58·5
0. 45	49. 40	2. 4	·1113	8. 45	·03170	9. 0	56·3	56·1
0. 55	49. 5	2. 18	·1110	12. 7:	·03318	18. 0	51·8	52·1
1. 48	47. 35	2. 54	·1110	15. 6	·03551	Min.	50·5	50·3
2. 0	48. 30	4. 0	·1114	18. 18	·03782	21. 0	51·9	52·1
2. 13	47. 5	4. 12	·1113	22. 15	·03830	22. 0	52·6	52·8
2. 44	46. 0	5. 29	·1117	23. 59	·03700	23. 0	53·6	53·0
4. 3	44. 30	5. 43	·1119					
5. 29	44. 25	8. 11	·1123					
5. 37	44. 40	10. 8	·1122					
5. 44	44. 5							
6. 53	44. 25	11. 49	·1123					
7. 46	43. 50	12. 2	·1126					
9. 10	44. 5	12. 38	·1123					
9. 18	43. 15	13. 0	·1125					
10. 33	44. 0	13. 12	·1123					
13. 58	43. 5	13. 53	·1126					
16. 8	42. 35	14. 11	·1130					
16. 27	43. 0	14. 35	·1127					
16. 40	42. 20	18. 33	·1131					
18. 8	42. 5	18. 57	·1130					
18. 26	42. 30							
		20. 45	·1112					
19. 30	40. 10	21. 0	·1114					
19. 40	41. 5	21. 35	·1107					
20. 0	40. 35	21. 55	·1108					
20. 8	41. 30	22. 30	·1103					
20. 30	40. 35	22. 37	·1104					
20. 33	41. 45	22. 55	·1102					
20. 51	41. 35	23. 14	·1107					
21. 46	44. 50	23. 26	·1103					
21. 53	45. 55	23. 59	·1110					
22. 2	45. 30							
22. 30	46. 10							
23. 17	48. 30							
23. 26	48. 5							
23. 59	49. 25							
Oct. 7		Oct. 7		Oct. 7		Oct. 7		
0. 0	20. 49. 25	0. 0	·1110	0. 0	·03700	0. 0	54·7	54·8
0. 19	50. 20	0. 17	·1114	2. 6	·03490	1. 0	55·5	55·7
0. 39	49. 35	0. 32	·1112	4. 40	·03070	2. 0	56·8	56·9
0. 55	51. 0	0. 56	·1118	5. 55	·02935	3. 0	57·4	57·8
1. 37	48. 25	1. 25	·1115	7. 49	·02900	6. 0	59·4	59·0
1. 46	49. 20	2. 16	·1119	8. 28	·02907	Max.	60·0	60·4

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 7		Oct. 7		Oct. 7		Oct. 7		
h m	° ′ ″	h m		h m		h m	°	°
2. 0	20. 48. 35	2. 25	·1122	9. 4	·02896	9. 0	59·5	59·1
2. 2	49. 25	2. 37	·1119	9. 34	·02830	12. 0	59·9	59·6
2. 17	49. 0	2. 47	·1119	10. 0	·02840	18. 20	58·0	59·0
2. 24	49. 35	3. 8	·1111	10. 37	·02826	Min.	58·0	57·6
2. 34	48. 35	3. 21	·1116	11. 33	·02857	21. 0	58·8	59·0
2. 59	49. 55	3. 40	·1106	16. 0	·02800	22. 0	59·4	59·0
3. 7	49. 0	3. 56	·1105	18. 7	·02825	23. 0	60·7	60·3
3. 15	50. 20	4. 11	·1110	18. 32	·02798			
3. 36	48. 40	4. 27	·1104	19. 38	·02796			
3. 48	48. 10	4. 41	·1101	20. 28	·02817			
4. 30	50. 0	4. 55	·1102	21. 13	·02800			
4. 46	49. 10	5. 8	·1098	23. 32	·02862			
5. 14	48. 25	5. 15	·1105	23. 59	·02843			
5. 40	46. 30	5. 23	·1103					
5. 56	47. 50	5. 34	·1102					
6. 52	43. 40	6. 8	·1106					
7. 10	43. 45	6. 11	·1109					
7. 33	39. 10	6. 22	·1105					
7. 52	38. 25	6. 32	·1112					
8. 18	42. 30	7. 0	·1115					
8. 42	41. 10	7. 22	·1111					
9. 7	50. 0	7. 40	·1104					
9. 44	23. 0	7. 52	·1103					
10. 13	35. 5	7. 57	·1102					
10. 26	33. 10	8. 15	·1112					
10. 57	39. 25	8. 36	·1107					
11. 7	39. 15	8. 59	·1123					
11. 45	42. 30	9. 16	·1112					
12. 18	42. 30	9. 30	·1112					
12. 22	41. 55	9. 49	·1129					
12. 44	42. 30	10. 3	·1116					
12. 54	42. 10	10. 17	·1098					
13. 10	43. 30	10. 36:	·1108					
13. 25	43. 30	10. 55	·1102					
13. 36	45. 10	11. 22	·1114					
14. 3	43. 35	11. 27	·1112					
14. 30	48. 15	11. 39	·1117					
14. 45	45. 55	12. 5	·1115					
15. 13	45. 40	12. 27	·1117					
16. 0	38. 55	12. 43	·1117					
16. 13	39. 15	13. 0	·1118					
16. 45	42. 15	13. 18	·1116					
16. 53	41. 35	13. 37	·1122					
17. 2	43. 30	13. 52	·1119					
17. 10	41. 30	14. 0	·1123					
17. 18	44. 50	14. 11	·1120					
17. 37	46. 15	14. 31	·1127					
17. 44	45. 40	14. 45	·1124					
18. 0	56. 20	15. 8	·1130					
18. 13	57. 5	15. 21	·1129					
18. 32	55. 20	15. 33	·1130					
18. 41	56. 5	16. 3	·1123					
18. 50	54. 10	16. 56	·1122					
18. 58	53. 40	17. 0	·1116					
19. 19	49. 20	17. 17	·1117					
19. 40	49. 15	17. 42	·1107					
19. 47	48. 5	18. 5	·1124					
20. 1	47. 5	18. 30	·1110					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 7		Oct. 7						
h m	° ′ ″	h m		h m		h m	°	°
20. 8	20. 44. 5	18. 39	·1113					
20. 15	47. 0	18. 52	·1111					
20. 24	44. 0	19. 10	·1120					
20. 28	46. 50	19. 33	·1118					
20. 36	45. 5	20. 6	·1103					
20. 43	46. 0	20. 12	·1114					
21. 0	45. 0	20. 18	·1104					
21. 31	55. 30	20. 24	·1113					
21. 54	20. 57. 35	20. 36	·1103					
22. 18	21. 2. 25	20. 40	·1105					
22. 30	20. 59. 30	20. 55	·1093					
22. 44	57. 45	21. 43	·1021					
22. 48	20. 55. 50	22. 0	·1030					
23. 35	21. 3. 35	22. 23	·1020					
23. 59	0. 30	22. 40	·1036					
		22. 58	·1038					
		23. 25	·1068					
		23. 36	·1063					
		23. 47	·1080					
		23. 59	·1083					
Oct. 8		Oct. 8		Oct. 8		Oct. 8		
0. 0	21. 0. 30	0. 0	·1083	0. 0	·02843	0. 0	61 ·5	61 ·2
0. 8	20. 58. 30	0. 22	·1092	0. 9	·02836	1. 0	62 ·4	62 ·0
0. 18	21. 0. 0	0. 41	·1094	1. 38	·02830	2. 0	63 ·8	63 ·6
0. 31	20. 58. 10	1. 24	·1072	2. 28	·02798	3. 0	64 ·2	64 ·2
0. 44	21. 1. 40	1. 50	·1088	3. 23	·02806	Max.	65 ·6	65 ·8
1. 0	21. 1. 5	1. 59	·1081	4. 38	·02765	9. 0	64 ·6	65 ·0
1. 23	20. 58. 10	2. 3	·1086	4. 56	·02790	18. 0	61 ·0	61 ·6
1. 35	59. 40	2. 18	·1077	5. 43	{·02730	Min.	57 ·8	57 ·4
1. 43	59. 5	2. 30	·1076		{·02925	21. 0	59 ·2	60 ·0
1. 48	59. 55	2. 42	·1060	7. 9:	·02775			
1. 56	59. 0	2. 53	·1068	7. 49	·02802			
2. 2	59. 50	3. 10	·1065	8. 36	·02735			
2. 10	58. 5	3. 23	·1073	9. 24	·02703			
2. 17	58. 35	3. 40	·1065	9. 38	·02717			
2. 25	56. 30	3. 52	·1063	10. 0	·02663			
2. 30	57. 55	4. 13	·1086	10. 47	·02610			
2. 37	56. 5	4. 26	·1071					
2. 47	51. 10	4. 38	·1061	11. 16	·02650			
2. 54	52. 5	4. 45	·1070	12. 30	·02606			
3. 11	51. 0	4. 54	·1056	13. 0	·02652			
3. 28	54. 20	5. 1	·1073	13. 20	·02628			
3. 42	51. 55	5. 6	·1063	14. 7	·02720			
3. 48	51. 20	5. 13	·1078	14. 39	·02766			
4. 1	51. 5	5. 33	·1049	16. 8	·02740			
4. 7	54. 20	5. 44	·1069	16. 30	·02775			
4. 13	53. 25	5. 51	·1068	17. 6	·02799			
4. 31	53. 35	6. 18	·1087	21. 26	·03230			
4. 41	49. 30	6. 30	·1100	23. 41	·03367			
4. 46	48. 35	6. 53	·1084	23. 53	·03362			
4. 59	35. 40	6. 55	·1088		(†)			
5. 9	29. 55	7. 18	·1076					
5. 28	45. 30	7. 28	·1084					
5. 36	37. 35	7. 33	·1082					
5. 46	41. 30	7. 38	·1090					
5. 57	40. 10	7. 53	·1072					
6. 0	41. 55	8. 3	·1085					
6. 8	41. 15	8. 15	·1090					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 8		Oct. 8						
h m	° ′ ″	h m		h m		h m	°	°
6. 27	20. 43. 5	8. 19	·1088					
6. 40	43. 5	8. 30	·1100					
6. 56	41. 0	8. 44	·1095					
7. 12	40. 20	8. 56	·1096					
7. 29	41. 30	9. 9	·1090					
7. 38	43. 5	9. 23	·1142					
7. 50	43. 30	9. 30	·1134					
8. 2	24. 25	9. 33	·1138					
8. 7	23. 40	9. 45	·1102					
8. 19	29. 55	10. 0	·1089					
8. 27	32. 0	10. 12	·1102					
8. 32	31. 10	10. 19	·1105					
8. 40	38. 20	10. 33	·1078					
8. 46	41. 0	10. 39	·1107					
8. 53	39. 0	10. 45	·1097					
9. 9	40. 10	10. 52	·1098					
9. 22	29. 0	11. 2	·1121					
9. 32	39. 0	11. 12	·1109					
9. 39	38. 15	11. 28	·1113					
9. 45	45. 35	11. 45	·1083					
10. 2	46. 0	11. 56	·1087					
10. 17	37. 20	12. 15	·1060					
10. 25	38. 50	12. 55	·1115					
10. 28	37. 35	13. 13	·1104					
10. 41	35. 40	13. 37	·1100					
10. 45	23. 45	14. 24	·1104					
10. 54	30. 10	14. 44	·1116					
11. 9	21. 0	14. 48	·1115					
11. 18	28. 5	14. 57	·1122					
11. 37	25. 25	15. 28	·1080					
11. 45	30. 35	15. 42	·1089					
12. 0	24. 30	15. 50	·1090					
12. 7	27. 5	15. 56	·1087					
12. 19	44. 15	16. 7	·1090					
12. 49	55. 5	16. 26	·1108					
13. 17	48. 5	16. 38	·1109					
13. 29	46. 45	16. 47	·1118					
13. 37	43. 0	17. 25	·1111					
13. 51	42. 10	17. 33	·1117					
13. 55	43. 15	17. 43	·1113					
14. 13	41. 50	17. 48	·1116					
14. 19	40. 10	18. 8	·1107					
14. 29	42. 10	18. 32	·1103					
14. 43	40. 5	18. 40	·1102					
14. 46	38. 10	18. 53	·1092					
14. 57	42. 5	18. 58	·1097					
15. 1	41. 45	19. 22	·1086					
15. 17	53. 35	19. 32	·1089					
15. 27	56. 0	19. 42	·1086					
15. 45	54. 0	20. 0	·1094					
15. 52	55. 10	20. 21	·1082					
15. 58	53. 35	20. 39	·1084					
16. 4	55. 5	20. 45	·1081					
16. 14	55. 10	21. 22	·1092					
16. 32	58. 5	21. 44	·1089					
16. 43	53. 30	22. 10	·1070					
16. 49	53. 40	22. 26	·1070					
17. 5	48. 0	22. 35	·1060					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 8		Oct. 8						
h m	° ′ ″	h m		h m		h m	°	°
17. 23	20. 49. 50	22. 47	·1089					
17. 30	48. 55	22. 55	·1062					
17. 43	49. 25	23. 15	·1072					
17. 52	48. 45	23. 27	·1087					
18. 13	51. 45		(†)					
18. 38	41. 0							
18. 49	50. 30							
18. 54	48. 5							
19. 2	48. 40							
19. 18	47. 0							
19. 23	45. 5							
19. 30	45. 30							
19. 47	43. 10							
	***							
20. 0	47. 30							
20. 21	47. 50							
20. 23	46. 0							
20. 42	44. 0							
20. 49	44. 40							
20. 59	43. 55							
	***							
21. 43	48. 10							
21. 50	49. 10							
21. 57	47. 55							
22. 27	50. 10							
22. 37	48. 45							
22. 51	50. 50							
	***							
23. 22	47. 50							
23. 30	49. 25							
23. 44	48. 10							
23. 59	48. 55							
Oct. 9		Oct. 9		Oct. 9		Oct. 9		
0. 0	20. 48. 55		(†)		(†)	1. 0	59.8 to 60.0	
0. 13	48. 35	0. 26	·1042	0. 38	·03370	3. 0	60.0 to 60.3	
0. 21	49. 25	0. 45	·1094	1. 38	·03353	6. 0	60.1 to 60.0	
0. 34	48. 55	1. 2	·1095	3. 23	·03363	Mark.	60.1 to 60.3	
0. 48	52. 5	1. 12	·1095	4. 36	·03318	9. 0	60.1 to 60.3	
0. 58	50. 45	1. 37	·1097	4. 45	·03330	18. 0	56.8 to 57.0	
1. 2	51. 30	1. 52	·1105	5. 54	·03218	Min.	55.0 to 55.3	
1. 30	48. 35	2. 5	·1088	8. 27	·03130	21. 0	56.0 to 57.0	
1. 42	51. 0	2. 16	·1087	9. 0	·03128			
1. 54	46. 10	2. 31	·1088	9. 28	·03132			
2. 24	47. 35	2. 42	·1098	10. 37	·03210			
2. 33	47. 15	2. 48	·1104		·03410			
2. 40	47. 0	3. 0	·1097	12. 0	·03427			
2. 58	41. 0	3. 23	·1093	14. 34	·03656			
3. 12	45. 45	3. 41	·1096	17. 17	·03677			
3. 16	44. 0	3. 52	·1095	19. 35	·03713			
3. 31	45. 15	4. 2	·1102	21. 12	·03702			
3. 45	41. 20	4. 20	·1088		(†)			
3. 58	44. 10	4. 30	·1095	23. 25	·03622			
4. 10	41. 30	4. 41	·1093	23. 50	·03574			
4. 23	38. 0	5. 1	·1118					
4. 34	48. 10	5. 17	·1167					
4. 57	39. 30	5. 30	·1114					
5. 8	37. 0	5. 59	·1092					
Oct. 9		Oct. 9						
h m	° ′ ″	h m						
5. 12	20. 36. 5	6. 15	·1099					
5. 44	40. 20	6. 23	·1094					
5. 53	38. 0	6. 38	·1109					
6. 3	37. 25	6. 45	·1100					
6. 15	38. 45	6. 55	·1115					
6. 28	35. 25	7. 13	·1118					
6. 36	37. 20	7. 46	·1098					
6. 45	32. 30	8. 12	·1105					
7. 1	34. 0	8. 27	·1120					
7. 10	39. 5	8. 37	·1125					
7. 35	41. 10	8. 58	·1127					
8. 0	40. 45	9. 22	·1104					
8. 5	41. 35	9. 32	·1107					
8. 22	38. 50	9. 47	·1103					
8. 36	43. 50	9. 55	·1106					
8. 52	41. 0	10. 7	·1105					
9. 10	43. 0	10. 14	·1100					
9. 28	40. 30		***					
9. 50	39. 15	10. 34	·1105					
10. 10	41. 0	10. 40	·1110					
10. 27	38. 25	10. 49	·1102					
10. 32	39. 0	11. 4	·1114					
10. 40	38. 0	11. 10	·1113					
10. 47	43. 50	11. 22	·1122					
11. 1	40. 30	11. 46	·1116					
11. 15	47. 0	12. 18	·1117					
11. 38	50. 5	13. 45	·1111					
12. 10	44. 10	14. 42	·1114					
12. 19	41. 30	15. 10	·1107					
13. 6	43. 10	15. 32	·1108					
13. 41	52. 50	15. 48	·1112					
14. 7	45. 0	16. 16	·1114					
14. 23	44. 0	16. 40	·1105					
14. 37	43. 55	17. 3	·1100					
14. 44	44. 45	17. 35	·1111					
15. 7	43. 50	17. 40	·1110					
15. 29	44. 45	18. 13	·1117					
15. 34	43. 55	18. 31	·1109					
15. 53	44. 10	18. 41	·1114					
16. 13	44. 55	19. 0	·1107					
16. 29	44. 20	19. 5	·1112					
16. 44	46. 55	19. 41	·1110					
16. 52	46. 30		***					
17. 11	49. 35	20. 19	·1103					
17. 19	48. 5	20. 35	·1104					
17. 38	46. 30	20. 52	·1101					
17. 44	44. 35		(†)					
17. 53	44. 55	21. 0	·1098*					
18. 0	43. 0	23. 4	·1097					
18. 15	43. 10	23. 16	·1093					
18. 44	41. 50	23. 23	·1096					
18. 48	40. 30	23. 39	·1090					
19. 8	42. 0		(†)					
19. 15	40. 30							
19. 23	41. 30							
19. 44	40. 30							
19. 59	41. 30							
20. 33	40. 20							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 9								
h m	° ′ ″	h m		h m		h m	°	°
20. 44	20. 42. 0							
20. 57	41. 5							
21. 13	42. 15							
	(†)							
23. 30	49. 10							
23. 43	48. 10							
23. 59	49. 15							
Oct. 10		Oct. 10		Oct. 10		Oct. 10		
0. 0	20. 49. 15		(†)	0. 0	·03574	1. 0	60·0	60·0
0. 8	47. 45	0. 23	·1094	2. 37	·03627	3. 0	61·7	61·4
1. 19	50. 0	0. 30	·1095	4. 5	·03670	Max.	63·1	63·2
1. 39	49. 0	0. 45	·1102	4. 28	·03652	9. 0	62·2	62·0
1. 45	48. 0		***	5. 13	·02940	Min.	57·4	57·1
1. 52	48. 10	1. 8	·1104	5. 54	·02869	22. 0	59·0	58·9
2. 7	43. 30	1. 45	·1096	6. 5	·02870			
2. 28	41. 55	1. 52	·1098	7. 13	·02768			
3. 22	45. 25	2. 0	·1090	9. 15	·02744			
3. 44	44. 45	2. 37	·1102	10. 3	·02670			
3. 53	43. 10	2. 54	·1098	10. 22	·02698			
4. 1	36. 10	3. 3	·1101	10. 40	·02680			
4. 7	34. 10	3. 18	·1100	12. 0	·02757			
4. 17	33. 0	3. 31	·1104	13. 0	·02750			
4. 33	38. 40	3. 59	·1083	14. 28	·02804			
4. 41	38. 10	4. 27	·1113	14. 57	·02798			
4. 50	41. 0	5. 1	·1090	16. 0	·02838			
5. 16	39. 55	5. 22	·1095	16. 23	·02830			
5. 22	40. 10	5. 42	·1081	20. 36	·03023			
5. 33	37. 15	6. 3	·1130	22. 48	·03098			
5. 53	20. 15	6. 23	·1108	23. 59	·03106			
6. 19	33. 20	6. 38	·1099					
6. 24	33. 10	6. 47	·1105					
6. 31	34. 45	7. 8	·1086					
6. 44	33. 30	7. 25	·1088					
7. 0	40. 0	7. 37	·1094					
7. 12	38. 45	8. 8	·1087					
7. 32	38. 55	8. 19	·1092					
7. 59	34. 25	8. 40	·1086					
8 13	33. 30	9. 0	·1092					
8. 31	37. 15	9. 26	·1118					
9. 3	31. 15	10. 0	·1075					
9. 20	36. 30	10. 18	·1118					
9. 46	46. 35	10. 40	·1086					
10. 13	34. 0	10. 45	·1087					
10. 31	42. 5	11. 0	·1095					
10. 41	38. 5	11. 23	·1094					
10. 53	36. 5	11. 34	·1095					
11. 29	38. 0	11. 43	·1097					
11. 46	41. 0	12. 24	·1098					
12. 10	40. 55	12. 43	·1095					
12. 40	48. 0	13. 8	·1104					
13. 7	43. 20	13. 22	·1097					
13. 13	43. 55	13. 38	·1098					
13. 21	42. 40	13. 45	·1102					
13. 49	43. 40	13. 53	·1100					
13. 57	42. 0	14. 25	·1104					
14. 17	41. 30	14. 34	·1107					
14. 41	48 25	14. 45	·1101					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 10		Oct. 10						
h m	° ′ ″	h m		h m		h m	°	°
15. 6	20. 45. 5	15. 32	·1095					
15. 15	46. 30	16. 8	·1111					
15. 38	44. 25	16. 49	·1110					
16. 1	50. 0	16. 56	·1113					
16. 48	43. 10	17. 11	·1108					
16. 57	44. 35	17. 29	·1106					
17. 13	44. 5		***					
17. 22	43. 0	18. 27	·1107					
17. 46	43. 5	18. 48	·1103					
17. 57	41. 55	18. 58	·1105					
18. 6	42. 0	19. 8	·1101					
18. 18	43. 25	19. 28	·1104					
18. 23	43. 5	19. 53	·1092					
18. 41	43. 45	19. 58	·1086					
19. 15	45. 5	20. 0	·1091					
19. 26	43. 35	20. 8	·1084					
19. 39	44. 5	20. 15	·1098					
19. 46	43. 5	20. 22	·1095					
19. 51	43. 45	20. 33	·1100					
19. 57	41. 25	20. 44	·1100					
20. 0	43. 10	21. 10	·1091					
20. 8	39. 15	21. 21	·1093					
20. 14	42. 0	21. 33	·1086					
20. 17	41. 5	21. 38	·1087					
	***	21. 56	·1075					
20. 44	43. 45	22. 0	·1079					
20. 59	42. 30	22. 14	·1078					
21. 2	43. 20	22. 27	·1080					
21. 13	42. 10	22. 36	·1086					
21. 42	45. 50		(†)					
21. 53	45. 0	23. 17	·1085					
22. 15	47. 30	23. 33	·1086					
22. 27	47. 15	23. 43	·1082					
23. 0	50. 10	23. 54	·1087					
23. 9	49. 10	23. 59	·1077					
23. 23	52. 0							
23. 40	52. 30							
23. 52	54. 0							
23. 59	52. 25							
Oct. 11		Oct. 11		Oct. 11		Oct. 11		
0. 0	20. 52. 25	0. 0	·1077	0. 0	·03164	1. 30	59·8	59·9
0. 13	49. 5	0. 10	·1081	0. 37	·03114	Max.	61·0	61·8
0. 22	48. 55	0. 20	·1092	1. 30	·03074	8. 30	61·5	61·7
0. 47	51. 10	0. 40	·1092	1. 55	·03070	18. 0	57·6	58·5
1. 0	49. 25	1. 1	·1081	2. 58	·03064	Min.	55·0	55·2
1. 4	49. 0	1. 9	·1089	3. 12	·03022	21. 0	57·6	57·6
1. 23	47. 50	1. 18	·1083	3. 36	·02978			
1. 31	47. 40	1. 47	·1094	3. 43	·02990			
1. 43	46. 25	1. 58	·1104	4. 55	·02855			
1. 56	48. 30	2. 7	·1101	5. 43	·02850			
1. 57	48. 5	2. 11	·1103		·03115			
2. 17	51. 20	2. 29	·1088	7. 16	·03010			
2. 23	49. 5	2. 40	·1097	8. 56	·02976			
2. 33	51. 50	2. 56	·1084	11. 48	·03022			
2. 48	46. 30	3. 15	·1102	13. 56:	·03100			
2. 55	47. 30	3. 27	·1087	14. 53	·03082			
3. 1	43. 55	3. 35	·1086	16. 20	·03190			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 11		Oct. 11		Oct. 11				
h m	° ′ ″	h m		h m		h m	°	°
3. 13	20. 42. 15	3. 41	·1074	18. 4	·03280			
3. 23	38. 5	3. 52	·1092	22. 8	·03536			
3. 30	38. 0	4. 13	·1106	23. 59	·03538			
3. 38	29. 30	4. 25	·1100					
3. 46	28. 50	4. 30	·1102					
3. 59	29. 0	4. 49	·1085					
4. 14	38. 45	5. 0	·1086					
4. 20	38. 5	5. 8	·1082					
4. 30	44. 5	5. 41	·1103					
4. 38	46. 35	5. 52	·1104					
4. 49	44. 5	6. 12	·1092					
4. 53	44. 30	6. 22	·1083					
5. 2	42. 5	6. 33	·1122					
5. 31	40. 50	6. 44	·1101					
5. 43	41. 30	6. 51	·1111					
6. 0	43. 35	7. 2	·1111					
6. 9	42. 5	7. 11	·1083					
6. 23	28. 10	7. 19	·1102					
6. 29	34. 30	7. 30	·1089					
6. 41	31. 10	7. 38	·1093					
7. 0	41. 5	7. 47	·1088					
7. 13	32. 55	8. 15	·1100					
7. 23	38. 25	8. 59	·1100					
7. 30	37. 40	9. 11	·1097					
7. 44	41. 5	9. 25	·1097					
8. 3	40. 10	9. 55	·1105					
8. 13	40. 55	10. 11	·1101					
8. 26	40. 0	10. 37	·1109					
8. 34	40. 45	10. 58	·1105					
8. 52	39. 55	11. 20	·1109					
9. 1	40. 50	11. 45	·1105					
9. 14	38. 55	12. 0	·1106					
9. 46	40. 10	12. 27	·1106					
10. 2	42. 30	12. 45	·1109					
10. 18	41. 0	13. 8	·1107					
10. 39	43. 15	13. 51	·1108					
11. 46	45. 30	14. 5	·1111					
11. 57	44. 5	14. 15	·1109					
12. 15	45. 35	14. 27	·1114					
12. 37	44. 0	14. 52	·1107					
13. 33	43. 25	15. 6	·1111					
13. 47	44. 50	15. 27	·1112					
13. 57	44. 25	16. 6	·1103					
14. 34	54. 50	16. 28	·1103					
15. 31	40. 0	16. 55	·1112					
15. 41	39. 15	17. 18	·1101					
16. 7	40. 25	17. 24	·1103					
16. 28	43. 10	17. 47	·1094					
16. 52	40. 50	18. 0	·1096					
17. 17	45. 35	18. 13	·1100					
17. 24	44. 50	18. 37	·1110					
17. 43	45. 15	18. 58	·1108					
17. 52	47. 10	19. 17	·1113					
17. 56	45. 15	19. 38	·1107					
18. 21	43. 30	19. 49	·1110					
18. 28	43. 55	20. 0	·1104					
			***					
19. 15	41. 55	20. 35	·1098					
Oct. 11		Oct. 11						
h m	° ′ ″	h m		h m		h m	°	°
19. 29	20. 44. 35	20. 50	·1097					
19. 49	41. 50	21. 0	·1098					
19. 57	44. 10	21. 50	·1078					
20. 7	43. 0	23. 22	·1102					
20. 12	44. 15	23. 42	·1098					
20. 37	41. 50	23. 59	·1103					
20. 54	42. 15							
21. 1	44. 0							
21. 35	44. 40							
22. 1	46. 10							
22. 17	48. 5							
23. 56	49. 5							
23. 59	49. 20							
Oct. 12		Oct. 12		Oct. 12		Oct. 12		
0. 0	20. 49. 20	0. 0	·1103	0. 0	·03538	1. 0	58 ·6	58 ·6
0. 31	51. 10	0. 14	·1102	2. 43	·03402	2. 57	59 ·9	60 ·0
0. 38	50. 40	0. 33	·1102	5. 30	·03098	Max.	61 ·0	61 ·7
0. 43	51. 10	0. 51	·1095	5. 45	·03100	9. 0	59 ·5	61 ·0
0. 52	49. 35	1. 0	·1098		·03333	19. 30	56 ·4	57 ·0
1. 1	49. 25	1. 16	·1094	7. 58	·03228	Min.	55 ·4	55 ·2
1. 29	46. 15	1. 32	·1099	9. 21	·03240	21. 0	56 ·2	57 ·2
1. 52	47. 55	1. 55	·1102	10. 57	·03312			
2. 0	47. 10	2. 2	·1098	11. 53	·03327			
2. 8	48. 0	2. 11	·1100	12. 53	·03375			
2. 33	45. 10	2. 26	·1091	14. 24	·03400			
2. 41	46. 0	2. 42	·1095	14. 47	·03364			
2. 50	45. 10	2. 51	·1091	15. 39	·03390			
3. 1	46. 25	3. 2	·1096	16. 37	·03465			
3. 39	44. 0	3. 17	·1090	16. 58	·03465			
4. 15	44. 10	3. 38	·1092	19. 44	·03623			
4. 23	42. 35	3. 45	·1097	21. 33:	·03680			
4. 42	42. 5	4. 10	·1104	23. 59	·03634			
5. 7	42. 35	4. 26	·1096					
5. 28	41. 15	4. 40	·1100					
5. 34	42. 0	5. 0	·1099					
6. 7	39. 15	5. 37	·1106					
6. 21	37. 10	5. 46	·1103					
6. 29	39. 15	5. 54	·1103					
6. 53	39. 0	6. 13	·1098					
7. 9	41. 10	6. 28	·1109					
7. 31	41. 55	6. 34	·1108					
7. 52	37. 0	6. 42	·1114					
8. 38	43. 0	6. 53	·1113					
9. 42	42. 0	7. 5	·1114					
10. 38	43. 10	7. 12	·1111					
10. 53	41. 10	7. 32	·1108					
11. 5	37. 30	8. 7	·1117					
11. 37	34. 15	8. 34	·1111					
12. 9	38. 55	9. 26	·1111					
12. 35	40. 0	9. 40	·1113					
12. 50	42. 0	10. 9	·1112					
13. 39	34. 5	10. 23	·1116					
14. 13	43. 5	10. 33	·1115					
14. 35	52. 35	10. 47	·1123					
14. 48	50. 5	10. 58	·1123					
15. 10	49. 10	11. 17	·1129					
15. 37	38. 10	11. 34	·1129					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 12		Oct. 12						
h m	° ′ ″	h m		h m		h m	°	°
15. 50	20. 36. 5	12. 3	·1114					
16. 7	35. 10		***					
16. 38	48. 30	12. 33	·1112					
16. 53	47. 20	12. 42	·1115					
17. 2	45. 5	13. 17	·1117					
17. 8	47. 10	14. 2	·1109					
17. 28	44. 35	14. 9	·1104					
17. 43	42. 30	14. 37	·1133					
18. 53	45. 20	14. 49	·1120					
19. 37	42. 50	14. 57	·1118					
19. 54	43. 50	15. 2	·1119					
20. 14	42. 0	15. 10	·1114					
20. 31	43. 0	15. 30	·1124					
20. 40	44. 30	16. 1	·1104					
20. 51	43. 5	16. 17	·1104					
21. 36	47. 20	16. 38	·1097					
22. 14	45. 5	16. 54	·1099					
22. 21	46. 30	17. 39	·1123					
22. 58	48. 5	17. 49	·1123					
23. 7	50. 10	18. 10	·1119					
23. 59	51. 5	18. 27	·1122					
		19. 2	·1112					
		19. 32	·1106					
		19. 41	·1106					
		20. 8	·1095					
		20. 15	·1097					
		20. 32	·1094					
		20. 41	·1088					
		21. 0	·1085					
		21. 15	·1084					
		21. 20	·1085					
		21. 28	·1082					
		21. 34	·1086					
		21. 47	·1085					
		21. 59	·1086					
		22. 30	·1081					
			***					
		23. 4	·1086					
		23. 23	·1081					
		23. 59	·1086					
Oct. 13		Oct. 13		Oct. 13		Oct. 13		
0. 0	20. 51. 5	0. 0	·1086	0. 0	·03634	1. 0	58 ·0	58 ·2
0. 13	51. 10	0. 25	·1085	1. 0	·03592	3. 0	59 ·0	59 ·0
0. 16	50. 35	0. 46	·1090	1. 28	·03594	Max.	59 ·2	61 ·2
0. 36	52. 30	1. 3	·1080	4. 36.	·03387	9. 0	58 ·5	58 ·5
0. 57	49. 40	1. 39	·1112	7. 8	·03325	18. 0	56 ·5	57 ·0
1. 15	46. 15	2. 32	·1104	7. 42	·03282	Min.	55 ·3	54 ·8
1. 30	48. 0	2. 50	·1107	12. 6	·03398	21. 0	56 ·3	56 ·8
1. 39	48. 5	3. 15	·1104	12. 30	·03394	22. 0	57 ·0	57 ·0
1. 53	49. 30	3. 32	·1105	16. 11	·03543	23. 0	58 ·0	58 ·0
2. 7	49. 35	3. 53	·1102	22. 13	·03650			
2. 23	48. 20	4. 9	·1105	23. 59	·03543			
4. 20	43. 10	4. 18	·1102					
4. 29	43. 20	4. 29	·1107					
5. 14	41. 55	4. 43	·1107					
5. 26	42. 10	5. 36	.1093					
5. 37	41. 30	6. 4	·1098					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 13		Oct. 13						
h m	° ′ ″	h m		h m		h m	°	°
5. 58	20. 43. 5	6. 32	·1081					
6. 20	36. 10	7. 12	·1110					
6. 30	24. 30	7. 29	·1105					
6. 43	15. 10	7. 47	·1084					
6. 51	16. 5	8. 28	·1096					
7. 0	19. 50	9. 2	·1083					
7. 11	30. 35	9. 19	·1092					
7. 33	36. 30	9. 38	·1083					
7. 45	33. 15	9. 56	·1097					
8. 11	32. 15	10. 10	·1100					
8. 28	32. 35	10. 32	·1109					
9. 3	29. 40	10. 45	·1112					
9. 8	28. 45	10. 53	·1110					
9. 31	34. 0	11. 7	·1114					
9. 45	32. 0	11. 36	·1112					
10. 4	35. 40	11. 42	·1110					
10. 16	36. 0	11. 47	·1108					
10. 47	40. 25	12. 2	·1121					
11. 6	41. 55	12. 20	·1120					
11. 23	40. 20	12. 38	·1114					
11. 32	38. 35	12. 48	·1113					
11. 46	38. 15	13. 16	·1119					
13. 9	45. 25	13. 30	·1116					
13. 28	44. 20	13. 43	·1116					
13. 44	44. 25	14. 12	·1111					
14. 0	43. 35		***					
14. 41	43. 55	15. 27	·1111					
15. 12	43. 15	15. 38	·1113					
15. 45	44. 0	15. 47	·1111					
15. 53	43. 10	15. 56	·1114					
16. 0	43. 55	16. 9	·1112					
16. 13	43. 10	16. 25	·1117					
16. 31	43. 45	16. 35	·1115					
16. 47	42. 30	17. 0	·1120					
16. 56	42. 55	17. 23	·1114					
17. 3	42. 10	17. 40	·1116					
17. 22	44. 40	17. 45	·1114					
17. 30	43. 15	18. 4	·1115					
17. 44	44. 5	18. 13	·1117					
18. 10	42. 55	18. 30	·1115					
18. 53	42. 50	18. 43	·1117					
19. 8	41. 45	19. 2	·1115					
19. 22	42. 5	19. 18	·1115					
19. 32	41. 5	20. 37	·1108					
20. 4	41. 0	20. 54	·1111					
20. 15	40. 5	22. 17	·1083					
20. 41	40. 30	22. 47	·1083					
21. 7	43. 25	22. 59	·1088					
21. 27	41. 25	23. 32	·1094					
21. 38	44. 30	23. 59	·1099					
21. 45	44. 10							
23. 3	49. 25							
23. 53	48. 30							
23. 59	48. 25							
Oct. 14		Oct. 14		Oct. 14		Oct. 14		
0. 0	20. 48. 25	0. 0	·1099	0. 0	·03543	0. 0	59 ·1	59 ·0
0. 33	49. 5	0. 52	·1105	4. 41	·02940	1. 0	59 ·8	59 ·9

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Oct. 14		Oct. 14		Oct. 14		Oct. 14		
h m	° ′ ″	h m		h m		h m	°	°
1. 13	20. 51. 5	1. 38	·1102	6. 7:	·02821	2. 0	60 ·9	60 ·9
1. 23	49. 15			8. 0	{·02766	3. 0	61 ·7	61 ·7
2. 17	48. 30	2. 38	·1106		{·03030	6. 0	62 ·8	62 ·8
2. 23	49. 5	2. 58	·1096	10. 30	·02974	Max.	62 ·8	63 ·1
2. 56	45. 45	3. 13	·1105	11. 4	·02940	9. 0	61 ·7	62 ·0
3. 32	44. 50	3. 17	·1105	12. 47	·03058	12. 0	60 ·7	60 ·9
4. 8	43. 35	3. 47	·1111	18. 15	·03320	18. 0	58 ·0	58 ·2
4. 33	43. 55	4. 3	·1108	20. 40	·03476	Min.	56 ·0	55 ·6
4. 59	41. 50			21. 13	{·03496	21. 4	57 ·1	57 ·7
5. 15	42. 55	4. 43	·1113		{·03460	22. 0	57 ·3	57 ·8
5. 35	42. 15	4. 48	·1112	23. 0	·03484	23. 0	57 ·7	58 ·1
5. 47	33. 55	5. 20	·1113	23. 59	·03460			
6. 4	28. 30	5. 37	·1108					
6. 15	30. 0	5. 47	·1093					
6. 22	29. 0	6. 7	·1093					
6. 31	30. 50	6. 20	·1105					
6. 47	36. 0	6. 28	·1105					
6. 59	36. 30	6. 40	·1110					
7. 18	40. 10	6. 52	·1110					
7. 37	39. 5	7. 0	·1106					
8. 2	36. 15	7. 14	·1107					
8. 26	41. 20	7. 46	·1099					
8. 48	32. 5	8. 4	·1099					
9. 1	30. 15	8. 24	·1106					
9. 11	31. 40	8. 33	·1102					
9. 24	28. 55	8. 46	·1100					
9. 43	34. 55	8. 58	·1100					
9. 59	34. 40	9. 8	·1095					
10. 23	41. 25	9. 23	·1098					
10. 32	41. 5	9. 38	·1111					
10. 48	44. 25	9. 52	·1107					
11. 30	40. 55	10. 11	·1119					
11. 47	42. 30	10. 20	·1118					
12. 22	40. 55	10. 41	·1152					
13. 17	43. 0	11. 13	·1118					
13. 50	42. 35	11. 24	·1115					
14. 51	44. 0	11. 38	·1116					
15. 0	43. 5	11. 55	·1111					
15. 7	44. 0	13. 5	·1112					
15. 28	42. 35	13. 20	·1114					
16. 18	45. 0	14. 10	·1113					
16. 38	43. 50	14. 49	·1115					
16. 53	44. 35	14. 59	·1114					
17. 6	43. 30	15. 43	·1119					
17. 28	43. 50	16. 0	·1115					
17. 43	45. 30	17. 3	·1116					
18. 0	45. 35	17. 38	·1123					
18. 45	43. 40	18. 47	·1112					
19. 17	44. 5	19. 47	·1110					
19. 36	43. 25	20. 5	·1112					
19. 48	41. 35	20. 15	·1110					
20. 7	42. 0	20. 30	·1111					
20. 14	41. 10	21. 30	·1084					
20. 30	43. 10	21. 43	·1084					
21. 27	44. 5	22. 9	·1080					
21. 55	47. 0	22. 17	·1087					
22. 2	46. 35	22. 36	·1091					
22. 27	49. 10	22. 49	·1091					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Oct. 14		Oct. 14				Oct. 15		
h m	° ′ ″	h m		h m		h m	°	°
22. 52	20. 45. 35	23. 28	·1100					
22. 58	46. 50	23. 37	·1100					
23. 5	46. 0	23. 59	·1103					
23. 18	48. 5							
23. 59	48. 0							
Oct. 15		Oct. 15		Oct. 15		Oct. 15		
0. 0	20. 48. 0	0. 0	·1103	0. 0	·03460	20. 0	58 ·4	58 ·8
0. 45	49. 5	0. 30	·1106	1. 57	·03335	1. 0	59 ·2	59 ·5
0. 58	48. 30	0. 48	·1108	2. 38	·03325	2. 0	59 ·8	60 ·0
1. 2	49. 50	0. 58	·1114	6. 29	·03092	3. 0	60 ·3	60 ·8
1. 53	49. 50	1. 10	·1112	9. 37	·03020	Max.	60 ·8	61 ·4
2. 8	52. 30	1. 40	·1111	13. 58	·03170	9. 0	60 ·0	61 ·0
2. 26	48. 55	1. 56	·1113	15. 6	·03197	18. 0	56 ·5	57 ·0
2. 38	49. 55	2. 26	·1101	20. 43	·03524	Min.	54 ·3	53 ·8
2. 48	46. 5		(†)	22. 31	·03585	21. 0	56 ·0	56 ·0
2. 53	46. 55	3. 6	·1099		(†)			
3. 0	46. 10	3. 17	·1103					
3. 10	46. 45	3. 27	·1097					
3. 15	45. 25	3. 48	·1102					
3. 26	46. 30	4. 0	·1102					
3. 33	46. 0	4. 8	·1099					
3. 40	47. 0	4. 19	·1098					
3. 59	46. 55	4. 29	·1092					
4. 12	47. 25	4. 52	·1099					
4. 26	45. 0	4. 57	·1098					
4. 37	45. 0		***					
4. 44	46. 5	5. 47	·1099					
4. 53	45. 10	6. 16	·1106					
5. 22	46. 55	8. 10	·1114					
5. 54	44. 50	8. 28	·1131					
6. 27	45. 15	8. 44	·1119					
7. 23	43. 40	8. 58	·1119					
7. 33	42. 55	9. 13	·1127					
7. 59	43. 30	9. 27	·1124					
8. 8	42. 10	9. 51	·1115					
8. 19	41. 50	10. 6	·1114					
8. 27	40. 0	10. 25	·1117					
8. 41	42. 45	10. 42	·1114					
9. 6	39. 0	11. 36	·1116					
9. 16	40. 5	11. 44	·1114					
9. 52	41. 25	11. 59	·1116					
10. 0	42. 35	12. 30	·1116					
10. 17	42. 35	12. 51	·1118					
10. 33	43. 10	13. 30	·1117					
10. 59	42. 30	13. 55	·1123					
12. 41	44. 10	14. 11	·1120					
13. 13	42. 10	14. 23	·1123					
13. 22	43. 15	15. 30	·1118					
13. 32	43. 10	15. 38	·1121					
14. 6	47. 5	15. 47	·1118					
14. 20	45. 55	16. 22	·1119					
14. 42	50. 0	17. 5	·1123					
14. 55	47. 30	17. 30	·1120					
15. 7	44. 15	17. 49	·1119					
15. 27	44. 5	17. 57	·1122					
15. 43	43. 0	18. 8	·1122					
15. 52	44. 5	18. 22	·1121					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 15		Oct. 15						
h m	° ′ ″	h m		h m		h m	°	°
16. 21	20. 44. 30	18. 37	·1122					
17. 13	43. 30	19. 30	·1113					
17. 38	43. 35	19. 46	·1112					
17. 47	42. 55	20. 17	·1113					
18. 37	43. 30	20. 49	·1111					
19. 19	42. 55	21. 13	·1112					
20. 7	41. 5	21. 53	·1103					
20. 38	40. 30	22. 38	·1103					
21. 6	40. 35	22. 50	·1106					
23. 13	47. 40	23. 4	·1104					
23. 20	46. 55	23. 15	·1106					
23. 52	48. 0	23. 59	·1107					
23. 59	47. 30							
Oct. 16		Oct. 16		Oct. 16		Oct. 16		
0. 0	20. 47. 30	0. 0	·1107		(†)	1. 0	58 ·2	58 ·2
0. 53	47. 0	1. 40	·1115	0. 59	·03640	3. 0	60 ·0	60 ·8
1. 18	47. 15	1. 56	·1108	2. 13	·03520	Max.	62 ·0	62 ·8
1. 33	48. 0	2. 37	·1102	3. 6	·03358	9. 0	61 ·0	61 ·0
1. 49	46. 45	3. 20	·1103	5. 16:	·03203	18. 30	59 ·0	57 ·3
2. 39	46. 30	3. 50	·1107	7. 0	·03183	Min.	55 ·7	55 ·0
4. 26	44. 10	4. 0	·1107		·03410	21. 0	57 ·3	57 ·2
4. 41	44. 30	4. 49	·1112	10. 53	·03390			
4. 58	43. 15	5. 24	·1110	12. 16	·03428			
5. 53	43. 20	5. 39	·1111	13. 15	·03446			
6. 24	42. 25	5. 47	·1113	14. 51	·03525			
7. 8	43. 25	6. 6	·1113	19. 0:	·03617			
7. 38	41. 40	6. 30	·1116	23. 59	·03490			
8. 3	43. 5	7. 0:	·1110					
8. 36	25. 0	7. 22	·1113					
9. 10	34. 40	8. 0	·1108					
9. 48	39. 0	8. 17	·1095					
10. 10	39. 5	8. 38	·1119					
10. 47	41. 55	8. 47	·1121					
11. 8	40. 10	9. 7	·1106					
11. 36	40. 5	9. 28	·1101					
11. 43	41. 20	9. 38	·1101					
12. 8	39. 25	9. 45	·1104					
12. 31	40. 5	10. 0	·1102					
12. 45	38. 0	10. 30	·1112					
12. 59	37. 50	10. 39	·1112					
13. 13	39. 25	10. 51	·1114					
13. 35	38. 0	11. 13	·1110					
14. 0	40. 0	11. 22	·1109					
14. 8	39. 10	11. 37	·1112					
14. 15	41. 0	11. 47	·1111					
14. 31	40. 5	11. 58	·1114					
14. 50	40. 55	12. 12	·1114					
15. 7	38. 40	12. 29	·1129					
15. 28	41. 55	12. 40	·1125					
15. 54	39. 35	12. 54	·1127					
16. 49	44. 5	13. 41	·1118					
17. 0	42. 10	13. 55	·1119					
17. 22	42. 30	14. 8	·1116					
17. 37	40. 35	14. 20	·1119					
17. 42	41. 30	14. 33	·1116					
17. 52	41. 0	14. 57	·1117					
18. 0	42. 0	15. 8	·1115					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 16		Oct. 16						
h m	° ′ ″	h m		h m		h m	°	°
18. 12	20. 41. 45	15. 30	·1120					
18. 16	40. 10	15. 39	·1116					
18. 23	41. 45	16. 9	·1123					
18. 41	40. 50	16. 15	·1120					
19. 4	42. 55	16. 33	·1119					
19. 20	42. 0	16. 53	·1121					
19. 37	43. 0	17. 0	·1117					
20. 9	41. 20	17. 20	·1124					
20. 23	42. 5	17. 35	·1120					
20. 34	39. 30	17. 42	·1123					
20. 42	42. 5	17. 51	·1121					
20. 47	39. 55	18. 15	·1123					
21. 33	41. 20	18. 22	·1126					
21. 38	40. 0	18. 58	·1126					
21. 44	41. 30	19. 20	·1124					
21. 55	42. 10	20. 18	·1119					
22. 0	41. 5	20. 26	·1125					
22. 4	42. 30	20. 34	·1113					
22. 21	43. 20	20. 42	·1121					
22. 37	48. 5	20. 49	·1115					
22. 47	45. 30	20. 58	·1120					
22. 56	46. 30	21. 10	·1117					
22. 59	45. 45							
23. 6	48. 15	22. 20	·1112					
23. 14	45. 30	22. 28	·1115					
23. 20	49. 5	22. 33	·1112					
23. 30	47. 25	22. 40	·1118					
23. 38	49. 10	22. 52	·1104					
23. 59	50. 15	23. 15	·1105					
		23. 19	·1110					
		23. 25	·1107					
		23. 34	·1108					
		23. 59	·1111					
Oct. 17		Oct. 17		Oct. 17		Oct. 17		
0. 0	20. 50. 15	0. 0	·1111	0. 0	·03490	1. 0	61 ·0	61 ·0
0. 7	52. 0	0. 5	·1114	2. 0	·03238	3. 0	62 ·9	63 ·3
0. 15	50. 35	0. 15	·1105	2. 47	·03230	Max.	63 ·8	64 ·6
0. 26	51. 45	0. 26	·1112	3. 28	·03176	9. 0	62 ·3	62 ·5
0. 37	50. 30	0. 32	·1104	5. 11	·03091	Min.	54 ·5	53 ·9
1. 8	51. 0	0. 52	·1097		·03290	22. 35	55 ·8	57 ·0
1. 42	53. 15	0. 59	·1088	6. 37	·03190			
1. 52	52. 15	1. 10	·1085	7. 12	·03181			
2. 0	54. 15	1. 25	·1091	7. 29	·03203			
2. 8	54. 30	1. 35	·1095	9. 8	·03191			
2. 19	51. 50	1. 48	·1092		·03366			
2. 23	52. 30	1. 50	·1094	12. 9:	·03402			
2. 34	49. 50		(†)	12. 58	·03606			
2. 41	42. 50	2. 52	·1097	16. 57	·03618			
2. 53	40. 25	3. 2	·1100	21. 2	·03743			
2. 59	42. 0	3. 19	·1096	22. 33	·03740			
3. 15	42. 45	3. 30	·1097	23. 59	·03741			
3. 22	42. 5	3. 45	·1094					
3. 29	43. 40	4. 9	·1095					
4. 0	46. 5	4. 15	·1092					
4. 8	47. 35	4. 24	·1095					
4. 14	46. 55	5. 5	·1092					
4. 18	47. 30	5. 26	·1096					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 17		Oct. 17						
h m	° ′ ″	h m		h m		h m	°	°
4. 52	20. 46. 50	5. 36	·1095					
5. 16	45. 0	6. 20	·1099					
5. 28	45. 30	6. 44	·1103					
6. 23	43. 0	7. 32	·1103					
7. 20	43. 15	7. 51	·1108					
7. 42	40. 50	8. 4	·1105					
7. 56	43. 0	8. 21	·1105					
8. 18	42. 45	8. 43	·1125					
8. 38	38. 25	9. 24	·1120					
9. 14	43. 0	9. 41:	·1128					
9. 32	40. 10	10. 12	·1113					
10. 0	43. 35	10. 42	·1118					
10. 21	40. 0	11. 1	·1128					
10. 40	39. 20	11. 25	·1112					
10. 58	35. 30	11. 45	·1118					
11. 13	37. 5	12. 11	·1109					
11. 30	34. 45	13. 18	·1108					
12. 27	41. 20	13. 24	·1111					
	***	13. 37	·1109					
14. 12	42. 50	13. 58	·1111					
14. 38	41. 35	14. 5	·1115					
14. 54	41. 45	14. 13	·1112					
15. 8	43. 35	14. 28	·1117					
15. 30	43. 0	14. 52	·1112					
15. 49	43. 30	15. 1	·1115					
16. 7	49. 0	15. 17	·1114					
16. 18	50. 30	15. 48	·1120					
16. 51	48. 0	16. 21	·1115					
17. 15	48. 30	16. 42	·1124					
18. 1	45. 10	16. 59	·1122					
18. 37	44. 10	17. 17	·1112					
18. 52	44. 45	17. 33	·1114					
19. 3	44. 10	18. 9	·1130					
19. 14	44. 5	19. 35	·1122					
19. 19	43. 20	20. 12	·1119					
19. 30	42. 5	20. 20	·1121					
19. 37	43. 0	21. 26	·1113					
19. 45	42. 10	21. 55	·1095					
20. 1	43. 20	22. 6	·1097					
20. 14	42. 0	22. 34	·1093					
20. 26	42. 30	22. 47	·1093					
20. 38	41. 10	23. 12	·1102					
20. 53	42. 5	23. 18	·1098					
21. 14	42. 5	23. 30	·1100					
21. 33	44. 15	23. 47	·1098					
21. 53	44. 0	23. 59	·1102					
22. 23	47. 10							
22. 56	46. 40							
23. 12	49. 0							
23. 28	48. 0							
23. 34	49. 10							
23. 59	47. 25							
Oct. 18		Oct. 18		Oct. 18		Oct. 18		
0. 0	20. 47. 25	0. 0	·1102	0. 0	·03741	Max.	59 ·5	59 ·7
0. 38	47. 50	0. 24	·1108	1. 53	·03702	7. 19	59 ·5	59 ·0
0. 47	48. 25	1. 6	·1107	2. 12	·03670	18. 30	59 ·3	59 ·0
0. 52	49. 50	1. 17	·1108	2. 44	·03650	Min.	58 ·0	58 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 18		Oct. 18		Oct. 18		Oct. 18		
h m	° ′ ″	h m		h m		h m	°	°
1. 0	20. 49. 10	1. 26	·1103	5. 46:	·03383	21. 0	59 ·3	59 ·3
1. 14	50. 55	1. 33	·1104	7. 38	·03279			
1. 37	48. 50	1. 57	·1113	9. 7	·03265			
2. 6	50. 0	2. 13	·1100	9. 35	·03278			
2. 14	48. 25	2. 44	·1107	15. 48	·03260			
2. 34	49. 5	3. 0	·1092	17. 54	·03230			
2. 48	50. 40	3. 17	·1104	21. 9	·03240			
3. 8	44. 35		***	21. 55	·03257			
3. 22	46. 0	4. 1	·1114	23. 59	·03197			
3. 34	44. 30	4. 30	·1111					
4. 19	44. 45	4. 51	·1117					
4. 32	43. 35	5. 12	·1113					
4. 45	45. 0	5. 27	·1116					
4. 58	43. 55	6. 33	·1114					
5. 18	44. 15	6. 47	·1117					
5. 46	43. 5	7. 42	·1118					
6. 31	42. 30	8. 11	·1117					
6. 45	42. 55	8. 42	·1117					
8. 0	41. 45	9. 26	·1109					
9. 0	41. 40	10. 0	·1115					
9. 16	39. 25	10. 57	·1116					
9. 31	39. 25	13. 22	·1116					
9. 53	41. 5	13. 34	·1117					
10. 27	40. 35	13. 49	·1117					
11. 38	41. 35	15. 8	·1121					
14. 15	42. 25	15. 29	·1117					
14. 26	43. 40	16. 0	·1118					
14. 47	42. 5	16. 53:	·1126					
15. 0	42. 35	17. 22	·1120					
15. 26	41. 0	17. 38	·1120					
15. 37	42. 0	17. 55	·1115					
15. 43	41. 10	18. 57	·1117					
16. 4	43. 45	19. 40	·1114					
16. 9	43. 10	20. 14	·1107					
16. 30	43. 25	20. 32	·1103					
16. 43	42. 45	21. 0	·1096					
16. 56	42. 20	21. 12	·1096					
17. 30	46. 5	21 43	·1090					
17. 46	45. 5	22. 3	·1098					
17. 53	43. 30	22. 51	·1097					
18. 9	42. 10	23. 14	·1097					
18. 25	43. 30		(†)					
18. 46	42. 30							
19. 9	43. 10							
19. 17	42. 35							
19. 43	42. 30							
20. 6	41. 30							
20. 38	41. 45							
20. 49	42. 50							
20. 58	42. 0							
21. 23	42. 40							
21. 30	43. 35							
21. 43	42. 10							
22. 7	43. 30							
22. 15	43. 0							
22. 32	44. 50							
22. 40	44. 15							
22. 53	45. 30							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 18								
h m	° ′ ″	h m		h m		h m	°	°
23. 6	20. 44. 55							
23. 59	47. 0							
Oct. 19		Oct. 19		Oct. 19		Oct. 19		
0. 0	20. 47. 0		(†)	0. 0	·03197	1. 0	61 ·8	61 ·6
0. 38	48. 15	0. 8	·1099	1. 54	·03115	3. 0	62 ·8	62 ·8
0. 47	47. 30	1. 5	·1103	4. 49	·03028	Max.	63 ·7	64 ·1
1. 21	48. 0	2. 6	·1103	6. 8	·03019	9. 0	63 ·0	63 ·0
2. 4	46. 35	2. 23	·1106		·03241	18. 45	60 ·7	61 ·2
3. 7	46. 5	2. 53	·1103	7. 47	·03195	Min.	58 ·7	58 ·5
4. 49	44. 0	4. 12	·1106	12. 7	·03182	21. 0	60 ·0	60 ·0
5. 43	43. 55	5. 16	·1110	15. 37:	·03230			
6. 35	42. 35	5. 44	·1109	21. 47	·03402			
6. 45	43. 5	6. 15	·1111	23. 59	·03382			
7. 0	42. 10	7. 1	·1109					
7. 22	42. 55	7. 53	·1113					
8. 38	42. 30	11. 13	·1111					
9. 7	42. 0	11. 28	·1115					
10. 7	42. 10	12. 2	·1111					
11. 22	42. 0	12. 40	·1111					
11. 43	42. 50	12. 58	·1114					
12. 7	41. 30	13. 26	·1111					
12. 31	41. 55	14. 1	·1113					
12. 45	41. 20	14. 18	·1110					
13. 8	42. 15	15. 22	·1116					
13. 34	41. 5	15. 54	·1113					
14. 2	41. 55	17. 27	·1117					
14. 24	41. 30	18. 8	·1115					
14. 46	46. 5	19. 20	·1116					
15. 17	44. 15	20. 43	·1111					
15. 38	42. 20	21. 5	·1108					
15. 59	42. 15	21. 21	·1106					
16. 21	42. 55	22. 55	·1107					
16. 52	42. 0	23. 6	·1111					
17. 48	41. 25	23. 25	·1111					
18. 3	42. 0		(†)					
18. 17	41. 30							
18. 50	42. 5							
21. 37	41. 30							
21. 58	43. 0							
22. 48	44. 30							
23. 3	47. 0							
23. 52	50. 0							
23. 59	49. 40							
Oct. 20		Oct. 20		Oct. 20		Oct. 20		
0. 0	20. 49. 40		(†)	0. 0	·03382	1. 0	61 ·7	62 ·0
0. 5	49. 20	1. 0	·1110*	4. 51	·03085	3. 0	62 ·6	63 ·0
0. 7	51. 0	1. 38	·1118	6. 13	·03038	Max.	63 ·4	63 ·4
0. 29	50. 5	2. 1	·1113	7. 11	·03074	9. 0	62 ·2	62 ·8
0. 33	51. 0	2. 16	·1120		·03328	18. 0	59 ·2	59 ·7
0. 42	49. 30	2. 34	·1113	8. 48	·03385	Min.	57 ·4	56 ·8
0. 59	49. 40	2. 47	·1117	10. 4	·03379	21. 0	58 ·5	59 ·0
1. 17	49. 5	3. 8	·1114	11. 34	·03400	22. 0	58 ·8	58 ·8
1. 37	50. 35	3. 25	·1116	12. 33	·03305	23. 0	58 ·0	58 ·3
1. 56	48. 55	3. 43	·1112	13. 14:	·03388			
2. 18	49. 20	3. 58	·1117	14. 40	·03439			
2. 28	47. 30	4. 42	·1120	15. 56:	·03475			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 20		Oct. 20		Oct. 20				
h m	° ′ ″	h m		h m		h m	°	°
2. 42	20. 48. 5	5. 13	·1113	17. 10	·03439			
3. 1	46. 30	5. 21	·1118	17. 45	·03463			
3. 23	46. 40	5. 35	·1114	18. 22	·03467			
3. 38	45. 55	5. 47	·1116	21. 7	·03564			
3. 42	46. 30	6. 43	·1105	22. 32	·03598			
3. 48	46. 0	6. 52	·1108	23. 59	·03598			
3. 55	46. 15	7. 1	·1103					
4. 5	45. 20	7. 8	·1109					
4. 17	45. 20	7. 20	·1104					
4. 27	46. 10	7. 31	·1106					
4. 32	45. 20	7. 47	·1099					
4. 37	46. 20	7. 57	·1104					
4. 42	45. 55	8. 28	·1085					
6. 13	47. 40	8. 33	·1086					
6. 23	47. 30	8. 38	·1084					
6. 59	48. 5	8. 46	·1094					
7. 9	46. 55	8. 52	·1093					
7. 14	47. 20	9. 2	·1099					
7. 22	47. 0	9. 33	·1092					
7. 36	47. 45	9. 43	·1101					
7. 48	45. 5	10. 6	·1092					
7. 58	47. 35	10. 15	·1102					
8. 7	47. 5	10. 25	·1102					
8. 15	46. 5	10. 44	·1087					
8. 30	44. 20	10. 52	·1093					
8. 36	42. 5	10. 57	·1091					
8. 46	40. 0	11. 8	·1099					
8. 53	38. 25	11. 27	·1089					
9. 0	40. 0	11. 47	·1111					
9. 36	37. 55	11. 55	·1103					
9. 41	39. 30	12. 9	·1118					
9. 47	39. 45	12. 38	·1089					
10. 9	30. 10	12. 58	·1105					
10. 22	29. 5	13. 8	·1105					
10. 37	33. 0	13. 29	·1097					
10. 57	29. 30		***					
11. 8	33. 30	14. 22	·1111					
11. 23	32. 10	14. 47	·1112					
11. 33	36. 45	15. 8	·1109					
11. 43	39. 5	15. 22	·1100					
11. 52	37. 50	15. 40	·1096					
12. 13	42. 45	16. 15	·1107					
12. 20	40. 30	16. 26	·1106					
12. 37	25. 35	16. 47	·1116					
12. 42	26. 55	17. 23	·1094					
12. 54	24. 30	18. 8	·1123					
13. 0	25. 30	18. 53	·1112					
13. 7	25. 25	19. 17	·1108					
13. 10	24. 25	19. 32	·1110					
	(†)	19. 53	·1100					
13. 28	39. 10	19. 57	·1102					
13. 36	39. 0	20. 7	·1096					
13. 39	41. 0	20. 23	·1093					
13. 47	41. 5	20. 54	·1090					
13. 58	39. 40	21. 6	·1085					
14. 2	38. 20	21. 23	·1087					
14. 35	35. 20	22. 9	·1083					
14. 53	36. 35	22. 21	·1076					

* For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 20		Oct. 20						
h m	° ′ ″	h m		h m		h m	°	°
15. 9	20. 40. 55	22. 37	·1088					
15. 17	40. 0	22. 59	·1091					
15. 30	42. 45	23. 14	·1085					
15. 49	42. 0	23. 35	·1089					
16. 6	44. 40	23. 59	·1091					
16. 31	53. 35							
16. 56	56. 0							
17. 20	56. 30							
17. 43	59. 25							
18. 19	50. 55							
18. 37	49. 30							
18. 52	49. 25							
19. 16	46. 5							
19. 28	47. 10							
19. 40	47. 15							
19. 52	45. 40							
20. 3	47. 45							
20. 19	46. 20							
20. 33	47. 5							
20. 43	45. 50							
21. 22	46. 50							
21. 31	46. 10							
22. 15	48. 25							
22. 23	48. 5							
22. 29	49. 10							
22. 35	48. 55							
22. 47	51. 15							
22. 57	50. 10							
23. 0	51. 10							
23. 7	50. 0							
23. 12	51. 0							
23. 44	52. 0							
23. 59	51. 5							
Oct. 21		Oct. 21		Oct. 21		Oct. 21		
0. 0	20. 51. 5	0. 0	·1091	0. 0	·03598	0. 0	59·2	59·4
0. 15	49. 50	0. 19	·1100	1. 26:	·03535	1. 0	60·0	60·5
0. 37	50. 0	0. 39	·1101	3. 10	·03334	2. 0	61·4	62·0
0. 47	49. 20	2. 5	·1101	5. 11	·03005	3. 0	62·5	63·0
1. 21	50. 35	2. 38	·1103	8. 4	·02955	6. 0	64·2	64·8
1. 38	49. 25	2. 50	·1100	10. 5	{·02966	Max.	64·6	65·2
3. 22	45. 50	3. 15	·1099		{·03192	9. 0	64·0	64·3
3. 37	44. 25	3. 39	·1101	13. 28:	·03267	12. 0	62·7	63·0
4. 5	43. 25	3. 56	·1099	17. 58	·03500	18. 0	59·9	60·2
4. 23	43. 45	4. 28	·1104	22. 15	·03580	Min.	57·8	57·6
5. 0	42. 30	4. 40	·1102	23. 59	·03545	21. 0	59·1	59·8
5. 26	43. 10	4. 48	·1105			22. 0	58·4	59·8
5. 37	42. 35	5. 10	·1106			23. 0	59·7	59·9
5. 48	43. 10	5. 37	·1100					
6. 2	40. 0	5. 43	·1102					
6. 15	36. 15	5. 56	·1099					
6. 45	40. 40	6. 15	·1097					
7. 1	38. 5	6. 43	·1108					
7. 35	40. 40	7. 0	·1108					
7. 55	42. 40	7. 10	·1112					
8. 9	41. 25	7. 23	·1107					
8. 17	42. 55	7. 44	·1108					
8. 33	42. 5	8. 10	·1104					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 21		Oct. 21						
h m	° ′ ″	h m		h m		h m	°	°
8. 43	20. 43. 0	8. 19	·1106					
9. 14	39. 40	8. 37	·1103					
9. 23	41. 50	8. 45	·1107					
9. 38	40. 10	8. 59	·1104					
9. 48	39. 45	9. 15	·1104					
9. 58	41. 5	9. 23	·1110					
10. 34	42. 40	9. 38	·1104					
10. 55	40. 30	9. 57	·1111					
11. 7	41. 35	10. 9	·1108					
11. 38	40. 30	10. 26	·1123					
12. 37	43. 20	10. 55	·1109					
13. 23	41. 55	11. 1	·1111					
13. 50	42. 10	11. 23	·1107					
14. 13	43. 30	12. 3	·1106					
14. 43	43. 15	13. 26	·1108					
14. 53	44. 50	13. 36	·1109					
16. 17	42. 55	14. 45	·1107					
17. 14	43. 10	15. 12	·1111					
17. 23	42. 10	16. 19	·1116					
18. 7	42. 25	17. 11	·1116					
18. 40	41. 40	17. 28	·1120					
19. 15	42. 0	17. 53	·1121					
19. 27	41. 15	18. 6	·1119					
20. 2	41. 55	18. 59	·1117					
20. 23	44. 15		***					
20. 47	43. 30	19. 45	·1109					
21. 30	46. 50	20. 12	·1110					
21. 45	44. 40	20. 20	·1104					
21. 53	45. 45	20. 51	·1095					
21. 58	44. 20	21. 27	·1098					
22. 3	46. 15	22. 3	·1105					
22. 15	45. 30	22. 13	·1101					
	***	22. 20	·1106					
22. 29	47. 35	22. 53	·1099					
22. 58	48. 35	22. 58	·1106					
23. 1	50. 15	23. 7	·1096					
23. 8	48. 30	23. 29	·1101					
23. 17	48. 0	23. 42	·1101					
23. 37	49. 45	23. 59	·1111					
23. 53	49. 10							
23. 59	49. 20							
Oct. 22		Oct. 22		Oct. 22		Oct. 22		
0. 0	20. 49. 20	0. 0	·1111	0. 0	·03545	0. 0	60·2	60·8
0. 9	49. 30	0. 20	·1111	3. 13	·03340	1. 0	61·2	61·1
0. 37	51. 35		(†)	4. 42	·03169	2. 0	61·6	61·9
0. 39	53. 5	1. 0	·1113*	7. 7	·03007	3. 0	62·6	62·7
0. 50	50. 55	1. 7	·1115	9. 18	·03036	Max.	63·3	63·5
0. 57	50. 40	1. 24	·1108	9. 53	·03062	9. 0	62·7	63·0
1. 6	52. 5	1. 40	·1112	10. 23	·03060	18. 0	57·0	57·8
1. 27	48. 50	2. 6	·1106	12. 7	·03146	Min.	53·8	53·2
1. 43	49. 5	2. 23	·1112	12. 44	·03164	21. 0	55·6	56·0
2. 3	47. 0	3. 8	·1109	13. 46	·03260			
2. 55	45. 25	3. 46	·1111	15. 55	·03426			
3. 20	45. 5	3. 58	·1106	18. 15	·03658			
3. 42	45. 35	4. 21	·1107	22. 43	·03785			
3. 52	44. 50	4. 28	·1105	23. 59	·03809			
4. 22	44. 10	4. 37	·1108					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Oct. 22		Oct. 22						
h m	° ′ ″	h m		h m		h m	°	°
4. 57	20. 44. 45	4. 49	·1105					
6. 17	42. 25	4. 58	·1110					
7. 7	43. 20	5. 6	·1107					
7. 26	42. 50	5. 19	·1106					
8. 47	43. 30	5. 54	·1111					
9. 10	42. 5	6. 4	·1114					
9. 28	37. 30	6. 17	·1108					
9. 53	38. 15	7. 0	·1115					
10. 32	36. 30	7. 35	·1112					
11. 1	41. 30	7. 58	·1115					
11. 17	40. 0	8. 12	·1113					
11. 42	43. 40	8. 24	·1117					
11. 57	41. 30	8. 34	·1114					
12. 8	41. 25	8. 45	·1115					
12. 35	37. 15	9. 16	·1100					
13. 0	30. 15	9. 41	·1101					
13. 44	33. 25	9. 59	·1111					
14. 8	38. 10	10. 15	·1112					
14. 33	39. 5	10. 27	·1106					
14. 49	37. 40	10. 39	·1109					
15. 17	38. 0	11. 2	·1103					
15. 35	42. 0	11. 17	·1104					
15. 59	41. 15	11. 23	·1106					
16. 24	38. 40	11. 33	·1105					
16. 38	39. 10	11. 41	·1110					
17. 16	42. 15	11. 51	·1105					
17. 33	41. 45	12. 1	·1113					
18. 0	43. 5	12. 8	·1112					
18. 28	42. 20	12. 15	·1117					
18. 51	43. 0	12. 26	·1118					
19. 3	42. 0	13. 10	·1099					
19. 21	42. 35	13. 18	·1102					
19. 58	41. 15	13. 39	·1102					
20. 22	42. 35	13. 50	·1106					
20. 30	42. 5	14. 0	·1104					
	***	14. 28	·1108					
21. 8	42. 5	14. 41	·1107					
21. 37	40. 55	15. 3	·1113					
22. 14	44. 15	15. 14	·1111					
22. 28	46. 40	15. 27	·1117					
22. 38	45. 5	15. 35	·1116					
22. 47	48. 0		***					
23. 1	46. 50	16. 15	·1118					
23. 17	48. 5	16. 29	·1121					
23. 23	46. 30	16. 52	·1120					
23. 35	48. 5	17. 4	·1122					
23. 44	47. 50	17. 30	·1120					
23. 59	48. 25	17. 52	·1121					
		18. 23	·1119					
		19. 1	·1123					
		19. 46	·1115					
		20. 18	·1115					
		21. 0	·1108					
		21. 32	·1106					
		23. 22	·1105					
		23. 29	·1103					
		23. 45	·1106					
			(†)					
Oct. 23		Oct. 23		Oct. 23		Oct. 23		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 48. 25		(†)	0. 0	·03809	1. 0	56 ·0	57 ·2
0. 14	49. 5	0. 32	·1103	2. 17	·03778	3. 0	57 ·4	57 ·8
0. 16	48. 30	0. 50	·1107	2. 57	·03746	Max.	59 ·0	59 ·5
0. 26	48. 55	1. 14	·1113	8. 4	·03420	9. 0	57 ·4	57 ·6
0. 34	47. 0	2. 26	·1116	13. 10	·03680	18. 0	56 ·4	56 ·8
0. 42	47. 20	3. 0	·1111	13. 39	·03699	Min.	47 ·4	46 ·6
2. 0	46. 0	3. 11	·1112	14. 58	·03854	21. 0	48 ·6	50 ·0
2. 12	47. 0	3. 33	·1109	22. 20	·04080			
2. 32	44. 45	3. 51	·1113	23. 59	·04097			
3. 0	44. 30	4. 22	·1102					
3. 14	43. 15	4. 43	·1113					
3. 28	44. 30	5. 3	·1108					
3. 58	43. 0	5. 13	·1109					
4. 11	41. 30	5. 25	·1114					
4. 37	42. 15	5. 43	·1111					
4. 54	41. 5	6. 6	·1111					
5. 2	41. 15	6. 48	·1115					
5. 17	40. 35	7. 22	·1116					
5. 24	39. 30	7. 30	·1118					
5. 43	41. 5	8. 15	·1116					
6. 2	43. 25	8. 25	·1117					
7. 22	42. 40	8. 41	·1115					
7. 36	43. 10	8. 53	·1117					
8. 13	42. 30	9. 8	·1112					
8. 53	43. 0	9. 25	·1110					
9. 3	40. 25	9. 55	·1113					
9. 27	39. 10	10. 12	·1113					
9. 59	42. 30	10. 40	·1120					
10. 23	41. 5	10. 48	·1116					
10. 33	42. 25	10. 53	·1118					
10. 49	40. 55	11. 14	·1113					
11. 2	42. 10	11. 39	·1120					
11. 23	41. 15	12. 7	·1112					
11. 49	43. 0	12. 41	·1118					
12. 17	41. 55	12. 55	·1118					
12. 35	43. 30	13. 12	·1129					
12. 53	42. 55	13. 25	·1131					
13. 17	45. 10	13. 48	·1122					
13. 37	44. 25	13. 59	·1120					
13. 52	42. 45	14. 13	·1121					
14. 22	43. 55	14. 22	·1120					
14. 37	42. 55	15. 0	·1120					
15. 3	44. 20	15. 12	·1125					
15. 39	42. 0	15. 28	·1127					
16. 12	42. 30	15. 43	·1123					
16. 21	43. 55	16. 16	·1120					
16. 28	43. 5	16. 34	·1124					
16. 37	44. 25	18. 5	·1126					
16. 45	43. 45	18. 20	·1124					
17. 8	43. 30	18. 43	·1128					
17. 18	44. 45	20. 11	·1122					
17. 30	43. 50		(†)					
17. 37	44. 55	21. 7	·1122					
17. 45	43. 25	21. 16	·1122					
18. 5	44. 15	21. 40	·1113					
18. 22	43. 5	22. 0	·1110					
	***	22. 19	·1110					
19. 52	43. 25	22. 42	·1101					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 23		Oct. 23						
h m	° ′ ″	h m		h m		h m	°	°
20. 6	20. 42. 30	22. 47	·1102					
20. 15	43. 0	22. 57	·1098					
20. 22	42. 5	23. 33	·1106					
20. 28	43. 5	23. 47	·1105					
21. 8	40. 40	23. 59	·1110					
21. 37	45. 15							
21. 52	44. 45							
22. 45	47. 25							
22. 53	47. 0							
23. 38	51. 5							
23. 46	50. 45							
23. 59	51. 0							
Oct. 24		Oct. 24		Oct. 24		Oct. 24		
0. 0	20. 51. 0	0. 0	·1110	0. 0	·04097	1. 0	51 ·0	51 ·5
0. 31	47. 40	0. 49	·1115	2. 14	·03956	3. 0	53 ·2	54 ·2
0. 43	51. 25	1. 24	·1111	4. 21	·03583	Max.	56 ·8	57 ·5
1. 23	48. 35	1. 45	·1112	5. 22	·03436	9. 0	55 ·8	57 ·0
1. 45	50. 10	2. 0	·1106	6. 23	·03339	Min.	50 ·9	50 ·3
1. 57	47. 5	2. 24	·1118	11. 55	·03310	21. 55	52 ·3	52 ·4
2. 6	45. 35	2. 51	·1114	15. 37	·03342			
2. 9	46. 15	5. 14	·1122	18. 59	·03420			
2. 16	45. 25	6. 50	·1122	21. 57	·03575			
2. 20	46. 5	7. 14	·1124	23. 59	·03616			
2. 25	45. 25	7. 45	·1123					
2. 32	46. 20	10. 57	·1124					
3. 2	46. 5	11. 12	·1125					
4. 17	43. 5	12. 10	·1122					
6. 22	41. 50	12. 21	·1123					
7. 23	41. 20	12. 52	·1123					
7. 42	42. 0	12. 59	·1125					
9. 16	41. 55	13. 7	·1123					
10. 47	42. 5	14. 30	·1121					
11. 22	42. 45	15. 17	·1123					
13. 44	43. 0	15. 30	·1122					
14. 22	42. 30	16. 53	·1124					
15. 15	43. 20	18. 58	·1124					
15. 33	42. 35	21. 3	·1117					
16. 11	43. 0	21. 40	·1113					
19. 15	41. 55	22. 18	·1113					
20. 32	39. 55	22. 38	·1110					
20. 47	40. 30	22. 52	·1111					
21. 28	40. 5	23. 10	·1109					
22. 11	42. 0	23. 28	·1110					
23. 32	46. 25	23. 34	·1108					
23. 41	46. 5	23. 59	·1109					
23. 59	46. 25							
Oct. 25		Oct. 25		Oct. 25		Oct. 25		
0. 0	20. 46. 25	0. 0	·1109	0. 0	·03616	1. 0	53 ·8	54 ·0
0. 14	46. 50	0. 30	·1114	1. 52:	·03543	Max.	57 ·2	58 ·0
0. 22	47. 45	0. 40	·1112	3. 56	·03332	9. 0	56 ·0	56 ·1
0. 35	46. 45	1. 22	·1119	10. 40:	·03266	18. 0	50 ·0	51 ·0
1. 44	47. 0	1. 45	·1121	19. 18	·04020	Min.	47 ·0	46 ·2
1. 52	46. 0	1. 54	·1119	21. 15	·04089	21. 0	48 ·0	49 ·0
1. 58	46. 30	5. 13	·1120	23. 59	·04110			
2. 11	45. 45	5. 42	·1124					
2. 23	46. 5	5. 51	·1122					
2. 35	45. 5	6. 8	·1124					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 25		Oct. 25						
h m	° ′ ″	h m		h m		h m	°	°
4. 27	20. 41. 55	7. 6	·1120					
4. 52	41. 25	7. 20	·1121					
5. 3	42. 0	7. 28	·1121					
5. 25	42. 15	7. 49	·1123					
5. 32	41. 30	8. 46	·1125					
5. 37	42. 5	9. 0	·1123					
5. 46	41. 15	9. 37	·1125					
6. 23	41. 55	9. 55	·1123					
6. 47	41. 20	10. 28	·1124					
7. 9	42. 10	10. 38	·1127					
10. 14	41. 30	10. 47	·1128					
10. 18	41. 0	11. 10	·1123					
10. 30	41. 55	11. 24	·1129					
10. 41	40. 15	11. 37	·1125					
11. 0	40. 5	11. 55	·1124					
11. 13	41. 55	12. 15	·1128					
11. 22	41. 15	12. 45	·1125					
12. 45	41. 0	13. 11	·1128					
12. 53	40. 30	13. 51	·1125					
13. 40	41. 55	14. 25	·1126					
13. 51	40. 45	14. 42	·1129					
14. 18	40. 40	14. 52	·1127					
14. 41	43. 5	15. 30	·1128					
15. 9	43. 35	16. 7	·1131					
15. 24	42. 20	17. 0	·1131					
15. 31	44. 0	17. 47	·1134					
15. 38	43. 0	19. 9	·1133					
15. 47	43. 35	20. 14	·1128					
16. 8	46. 20	20. 59	·1124					
16. 45	44. 0	21. 13	·1124					
17. 39	42. 55	21. 45	·1121					
17. 45	43. 30	22. 45	·1122					
17. 59	42. 15	23. 6	·1119					
18. 27	42. 45	23. 22	·1121					
18. 44	41. 35	23. 59	·1126					
18. 55	42. 35							
20. 23	41. 45							
20. 30	40. 45							
20. 37	41. 35							
20. 43	40. 35							
21. 13	40. 30							
21. 39	39. 30							
22. 55	45. 0							
23. 29	45. 20							
23. 59	47. 30							
Oct. 26		Oct. 26		Oct. 26		Oct. 26		
0. 0	20. 47. 30	0. 0	·1126	0. 0	·04110	1. 0	50 ·7	51 ·5
0. 13	48. 0	0. 24	·1128	0. 28	·04100	3. 0	53 ·9	54 ·9
0. 22	48. 5	0. 36	·1133	2. 13	·03957	Max.	58 ·0	59 ·0
0. 46	50. 10	0. 47	·1126	3. 37	·03620	9. 0	56 ·6	56 ·8
0. 50	47. 40	0. 58	·1130	4. 3	·03468	18. 0	50 ·2	51 ·3
0. 58	48. 50	1. 40	·1124	4. 56	·03295	Min.	47 ·5	47 ·0
1. 6	47. 30	2. 28	·1124	7. 39	·03206	21. 0	49 ·0	50 ·0
1. 15	49. 0	2. 44	·1121	9. 43	·03200			
1. 30	49. 5	3. 13	·1119	11. 38	·03234			
1. 57	46. 40	3. 22	·1121	14. 53:	·03420			
2. 24	48. 25	3. 27	·1120	19. 30	·03940			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Oct. 26	
h m	° ′ ″
2. 40	20. 46. 35
3. 21	44. 35
3. 27	45. 10
4. 4	43. 35
5. 24	43. 45
5. 58	42. 20
6. 23	42. 40
7. 15	41. 15
7. 26	41. 20
7. 40	39. 25
8. 1	41. 40
8. 27	42. 5
8. 32	42. 35
9. 17	41. 15
9. 28	41. 30
9. 53	36. 40
10. 17	35. 40
10. 32	37. 45
10. 58	36. 55
11. 28	39. 5
11. 42	37. 10
12. 10	41. 20
	***
13. 56	43. 5
15. 30	43. 55
15. 40	43. 20
17. 17	42. 55
17. 48	44. 35
18. 19	43. 25
19. 12	42. 30
19. 23	43. 25
19. 37	42. 25
	***
21. 22	41. 0
21. 30	42. 0
21. 38	40. 50
21. 51	43. 25
22. 43	48. 5
23. 34	50. 10
23. 59	48. 20
Oct. 27	
0. 0	20. 48. 20
0. 8	47. 55
0. 30	47. 55
0. 45	49. 20
0. 56	49. 5
1. 34	51. 0
1. 48	50. 25
1. 56	51. 10
2. 13	49. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 26	
h m	
3. 37	·1125
3. 58	·1123
4. 21	·1123
4. 58	·1127
5. 12	·1126
5. 30	·1122
5. 43	·1124
5. 57	·1123
6. 18	·1125
7. 8	·1123
7. 16	·1120
7. 29	·1122
7. 40	·1119
7. 59	·1121
8. 26	·1121
8. 40	·1125
9. 25	·1122
9. 40	·1129
9. 52	·1127
10. 10	·1126
10. 38	·1120
11. 3	·1134
11. 30	·1129
11. 35	·1130
12. 8	·1124
12. 22	·1125
13. 23	·1125
13. 30	·1127
13. 46	·1126
14. 42	·1126
15. 39	·1129
16. 12	·1132
17. 45	·1133
18. 10	·1136
18. 30	·1134
19. 38	·1132
20. 8	·1132
20. 53	·1127
21. 2	·1124
21. 54	·1118
22. 0	·1119
22. 23	·1107
22. 53	·1108
23. 10	·1115
23. 28	·1118
23. 54	·1118
	(†)
Oct. 27	
	(†)
0. 15	·1118
0. 30	·1116
0. 55	·1124
1. 31	·1124
1. 38	·1120
1. 56	·1123
2. 18	·1118
2. 42	·1120

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Oct. 26	
h m	
20. 37	·04025
20. 55	·04034
	·03928
22. 32	·04035
23. 59	·04053
Oct. 27	
0. 0	·04053
	(†)
1. 0	·04063*
1. 40	·03979
3. 5	·03900
5. 29	·03630
5. 52	·03601
6. 38	·03498
10. 14	·03335

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Oct. 26		
Oct. 27		
1. 0	50·0	51·0
3. 0	52·0	52·6
Max.	55·0	55·3
9. 0	54·5	55·0
18. 0	53·1	53·2
Min.	51·7	51·5
21. 0	52·0	53·2
22. 0	53·0	53·7
23. 0	53·8	54·0

Greenwich Mean Solar Time.	Western Declination.
Oct. 27	
h m	° ′ ″
2. 47	20. 50. 0
3. 8	51. 15
3. 13	49. 35
3. 37	47. 15
3. 55	47. 50
4. 2	46. 25
4. 15	47. 45
5. 7	47. 0
5. 19	47. 50
5. 34	43. 15
5. 56	38. 30
6. 2	41. 25
6. 20	35. 50
6. 29	35. 35
6. 37	38. 35
6. 43	37. 50
7. 0	40. 55
7. 14	41. 0
7. 26	42. 35
7. 39	41. 55
8. 26	41. 15
8. 34	42. 0
9. 1	40. 30
9. 57	41. 35
10. 41	41. 5
11. 23	42. 15
11. 42	41. 40
13. 44	43. 10
14. 10	41. 45
14. 28	41. 45
14. 57	43. 50
15. 20	42. 25
15. 38	43. 5
16. 6	42. 15
16. 11	43. 5
16. 18	42. 20
16. 30	43. 10
16. 38	42. 15
16. 52	43. 0
17. 28	42. 5
18. 0	42. 55
18. 22	41. 10
18. 37	42. 35
18. 45	42. 0
	***
19. 18	41. 20
19. 23	42. 10
19. 58	41. 15
	***
20. 33	43. 0
21. 36	42. 10
22. 15	44. 0
22. 23	43. 10
22. 36	47. 45
22. 43	47. 30
22. 59	49. 10
23. 11	48. 25
23. 23	49. 30

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Oct. 27	
h m	
3. 40	·1107
3. 58	·1112
4. 6	·1111
	***
4. 34	·1109
4. 49	·1114
5. 10	·1110
5. 22	·1113
5. 39	·1106
5. 48	·1111
5. 53	·1110
6. 8	·1121
6. 11	·1121
6. 20	·1126
6. 25	·1123
6. 38	·1126
6. 50	·1113
7. 12	·1102
7. 30	·1102
7. 44	·1108
7. 52	·1109
8. 25	·1121
8. 43	·1119
9. 0	·1118
9. 17	·1119
9. 32	·1122
10. 9	·1123
10. 26	·1121
10. 50	·1124
12. 14	·1124
12. 25	·1126
12. 43	·1124
13. 53	·1124
14. 1	·1126
14. 41	·1121
14. 45	·1122
14. 53	·1121
15. 23	·1126
16. 24	·1123
16. 38	·1125
17. 12	·1125
17. 30	·1123
18. 8	·1126
18. 23	·1123
18. 30	·1122
19. 2	·1125
19. 32	·1123
19. 57	·1117
20. 45	·1112
21. 15	·1112
22. 10	·1110
22. 24	·1116
22. 48	·1113
22. 58	·1110
23. 38	·1109
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Oct. 27	
h m	
12. 50	·03332
15. 59	·03350
21. 52	·03435
23. 1	·03408
23. 59	·03347

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 27	° ′ ″	h m		h m		h m	°	°
23. 50	20. 48. 50							
23. 59	50. 20							
Oct. 28		Oct. 28		Oct. 28		Oct. 28		
0. 0	20. 50. 20		(†)	0. 0	·03347	0. 0	54 ·7	55 ·0
0. 6	51. 35	0. 22	·1107	0. 52	·03303	1. 0	55 ·8	55 ·8
0. 31	50. 30	0. 37	·1108	5. 23	·03157	2. 0	56 ·4	56 ·6
0. 47	48. 55	0. 49	·1106	8. 35	·03145	3. 0	57 ·3	57 ·7
1. 0	49. 20	0. 59	·1112	9. 6	·03156	6. 0	58 ·0	58 ·0
1. 7	48. 40		(†)	10. 32	·03235	Max.	59 ·0	59 ·7
1. 23	49. 40	1. 0	·1110	13. 49	·03368	9. 0	57 ·0	58 ·0
1. 36	47. 0	1. 57	·1116	19. 36	·03685	12. 0	56 ·0	56 ·8
2. 39	47. 25	2. 46	·1117	21. 58	·03778	18. 0	53 ·0	53 ·9
2. 48	48. 35	3. 3	·1112	22. 53	·03771	Min.	51 ·4	51 ·0
3. 12	47. 45	3. 45	·1116		·03657	21. 0	52 ·0	53 ·0
3. 37	45. 55	4. 1	·1113	23. 59	·03640	22. 0	52 ·0	53 ·0
4. 0	45. 30	4. 20	·1111			23. 0	53 ·0	53 ·8
4. 30	43. 10	4. 54	·1118					
6. 42	43. 0	6. 9	·1120					
7. 19	41. 55	6. 19	·1121					
10. 37	41. 45	6. 43	·1120					
11. 16	42. 25	7. 51	·1123					
11. 37	42. 0	8. 30	·1122					
11. 55	41. 55	8. 50	·1123					
12. 9	42. 20	9. 48	·1123					
12. 47	42. 30	10. 8	·1120					
13. 0	43. 5	10. 22	·1122					
14. 43	41. 5	11. 7	·1120					
15. 33	43. 10	11. 19	·1121					
16. 52	42. 10	12. 23	·1121					
17. 43	42. 40	13. 15	·1125					
18. 30	41. 55	15. 8	·1123					
18. 45	42. 5	17. 40	·1126					
19. 20	41. 45	17. 46	·1125					
19. 34	42. 25	18. 50	·1126					
20. 15	42. 5	19. 56	·1121					
20. 28	41. 29	21. 9	·1118					
20. 33	42. 5	21. 43	·1113					
20. 52	41. 10	23. 20	·1111					
21. 8	41. 35	23. 59	·1110					
21. 35	41. 5							
22. 18	43. 0							
22. 30	44. 10							
22. 39	44. 5							
22. 56	45. 25							
23. 14	46. 0							
23. 22	47. 0							
23. 42	47. 10							
23. 59	48. 0							
Oct. 29		Oct. 29		Oct. 29		Oct. 29		
0. 0	20. 48. 0	0. 0	·1110	0. 0	·03640	0. 0	53 ·5	54 ·0
0. 32	48. 5	0. 15	·1111	0. 13	·03610	1. 0	54 ·2	54 ·8
0. 55	49. 25		(†)	4. 13	·03292	2. 0	55 ·0	55 ·6
1. 18	47. 20	0. 43	·1116	5. 35	·03198	3. 0	56 ·0	56 ·2
2. 17	46. 0	1. 0	·1117	7. 21	·03185	Max.	58 ·0	57 ·7
2. 31	46. 55	1. 16	·1114	7. 36	·03204	9. 0	55 ·8	55 ·9
2. 54	44. 55	1. 57	·1117		·03540	18. 15	50 ·9	51 ·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 29	° ′ ″	Oct. 29		Oct. 29		Oct. 29		
h m		h m		h m		h m	°	
4. 12	20. 43. 15	2. 8	·1116	10. 43:	·03579	Min.	48 ·8	48 ·1
5. 33	42. 35	2. 35	·1119	14. 15	·03808	21. 0	50 ·0	50 ·7
6. 35	43. 0	2. 53	·1117	15. 9	·03833			
7. 15	42. 35	4. 51	·1122	18. 6	·03943			
7. 41	43. 5	7. 13	·1123	21. 23	·04013			
9. 1	41. 30	7. 40	·1126	23. 41	·03974			
9. 16	42. 25	8. 11	·1123		(†)			
9. 36	40. 55	9. 50	·1124					
9. 46	42. 0	10. 6	·1128					
10. 0	40. 30	10. 22	·1125					
10. 51	42. 35	10. 45	·1124					
13. 30	42. 30	10. 57	·1125					
13. 40	45. 0	11. 15	·1124					
15. 7	41. 55	11. 33	·1126					
15. 26	41. 55	12. 5	·1124					
15. 55	43. 5	12. 20	·1126					
16. 29	42. 0	12. 42	·1126					
18. 6	43. 10	12. 47	·1127					
18. 37	42. 15	13. 16	·1127					
19. 7	42. 40	13. 27	·1125					
20. 17	41. 0	13. 41	·1126					
20. 23	41. 25	14. 7	·1131					
20. 32	40. 20	14. 30	·1132					
21. 37	41. 0	15. 2	·1127					
22. 26	43. 10	15. 52	·1126					
23. 6	46. 0	16. 23	·1128					
23. 13	46. 55	18. 8	·1127					
23. 17	46. 0	18. 22	·1129					
23. 59	47. 5	18. 57	·1126					
		19. 10	·1128					
		19. 52	·1127					
		20. 0	·1128					
		20. 19	·1125					
		21. 12	·1120					
			(†)					
		23. 59	·1115					
Oct. 30		Oct. 30		Oct. 30		Oct. 30		
0. 0	20. 47. 5	0. 0	·1115		(†)	1. 0	52 ·3	52 ·4
0. 58	48. 25	1. 10	·1121	1. 0	·03904*	3. 0	53 ·9	54 ·0
2. 3	47. 35	1. 17	·1120	2. 0	·03808	6. 0	53 ·7	54 ·3
3. 1	45. 45	1. 54	·1122	6. 17:	·03423	Max.	55 ·5	55 ·5
4. 23	43. 35	3. 8	·1122	11. 0	·03526	9. 0	52 ·8	53 ·0
5. 15	43. 15	3. 32	·1124	16. 52	·04100	18. 0	47 ·1	48 ·0
5. 48	43. 45	4. 39	·1123	21. 23	·04180	Min.	46 ·0	45 ·2
6. 43	42. 45	5. 42	·1126	23. 15	·04160	21. 0	46 ·5	47 ·1
	***	7. 46	·1128	23. 59	·04106			
9. 44	43. 0	9. 38	·1127					
10. 8	40. 35	10. 3	·1132					
10. 18	42. 30	10. 27	·1126					
10. 31	42. 10	10. 42	·1138					
10. 43	43. 25	11. 3	·1128					
11. 3	41. 0	11. 18	·1128					
11. 32	43. 25	11. 57	·1132					
13. 42	43. 55	12. 27	·1129					
14. 38	44. 50	14. 22	·1132					
14. 52	44. 20	14. 52	·1133					
15. 29	44. 25	18. 1	·1136					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. On H. F. Magnet.	On V. F. Magnet.
Oct. 30		Oct. 30						
h m	° ′ ″	h m		h m		d h m	°	°
16. 17	20. 43. 50	18. 39	·1135					
18. 38	43. 5	20. 57	·1120					
18. 47	42. 15	21. 28	·1119					
18. 56	42. 35	22. 17	·1113					
19. 30	41. 15	22. 45	·1114					
20. 46	40. 10	23. 38	·1112					
22. 8	43. 15	23. 59	·1116					
22. 30	44. 30							
22. 47	44. 55							
23. 44	47. 25							
23. 59	47. 10							
Oct. 31		Oct. 31		Oct. 31		Oct. 31		
0. 0	20. 47. 10	0. 0	·1116	0. 0	·04106	1. 0	49 ·8	50 ·0
0. 23	47. 25	0. 51	·1120	2. 0:	·03864	3. 0	52 ·6	53 ·0
0. 32	48. 15	1. 14	·1117	4. 16	·03360	Max.	56 ·1	57 ·0
1. 51	47. 5	1. 37	·1121	7. 0	·03304	9. 0	52 ·6	52 ·6
3. 16	44. 5	2. 7	·1119	8. 22	·03318	Min.	45 ·3	44 ·3
4. 45	42. 55		***	8. 36	·03337	21. 45	46 ·3	47 ·3
5. 4	43. 10	3. 4	·1128	10. 45	·03412			
5. 39	42. 40	3. 43	·1127	12. 7	{·03477			
6. 18	43. 15	3. 57	·1129		{·03695			
7. 16	42. 5	4. 49	·1128	14. 46:	·03860			
7. 27	42. 35	5. 45	·1128	17. 58	·04093			
7. 53	41. 30	6. 17	·1127	21. 13	·04197			
8. 12	42. 25	7. 2	·1129	23. 59	·04219			
	***	7. 18	·1128					
10. 22	41. 55	8. 0	·1129					
	***	8. 10	·1131					
11. 8	42. 5	8. 22	·1129					
11. 53	41. 25	8. 42	·1131					
	***	8. 59	·1130					
13. 43	43. 0	11. 0	·1131					
14. 37	42. 25	11. 12	·1133					
15. 42	43. 30	12. 17	·1134					
	***	12. 30	·1134					
19. 4	42. 30	12. 43	·1135					
20. 37	40. 5	14. 57	·1135					
21. 22	41. 0	15. 34	·1137					
22. 3	42. 55	15. 46	·1136					
23. 45	47. 10	16. 11	·1139					
23. 59	47. 15	17. 58	·1142					
		18. 52	·1143					
		20. 29	·1134					
		21. 13	·1127					
		21. 28	·1126					
		21. 41	·1127					
		22. 1	·1122					
		22. 23	·1124					
		22. 34	·1129					
		22. 47	·1093					
		23. 48	·1123					
		23. 59	·1124					
Nov. 1		Nov. 1		Nov. 1		Nov. 1		
0. 0	20. 47. 15	0. 0	·1124	0. 0	·04219	1. 0	47 ·3	47 ·3
0. 15	49. 5	0. 42	·1131	1. 38	·04198	Max.	49 ·2	49 ·5
0. 45	49. 15		***	7. 22	·03916	8. 30	48 ·8	49 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. On H. F. Magnet.	On V. F. Magnet.
Nov. 1		Nov. 1		Nov. 1		Nov. 1		
h m	° ′ ″	h m		h m		h m	°	°
1. 14	20. 49. 40	1. 49	·1133	7. 38	·03925	Min.	47 ·0	46 ·5
1. 48	48. 45	2. 0	·1130	8. 30	·03884	18. 20	48 ·0	48 ·6
1. 56	49. 5	2. 15	·1133	10. 12	·03885	21. 0	48 ·3	49 ·0
2. 9	47. 40	2. 44	·1133	11. 10	·03898			
2. 39	47. 30	2. 53	·1134	12. 22	·03910			
2. 56	46. 45	3. 6	·1138	14. 37	·03961			
3. 22	47. 25	3. 21	·1133	16. 32	·03962			
3. 37	47. 0	3. 34	·1133	17. 2	·03924			
4. 42	47. 10	3. 48	·1135	19. 39	·03881			
4. 52	46. 35	4. 11	·1132	23. 15	·03792			
5. 32	47. 5	4. 21	·1135	23. 59	·03734			
5. 53	45. 15	4. 40	·1129					
6. 27	45. 0	4. 53	·1131					
6. 37	43. 55	5. 43	·1125					
6. 45	44. 40	5. 54	·1127					
6. 58	44. 15	6. 23	·1124					
7. 25	34. 0	6. 33	·1126					
8. 2	41. 5	6. 47	·1122					
8. 31	32. 30	7. 1	·1112					
8. 45	37. 55	7. 11	·1118					
8. 52	37. 20	7. 41	·1124					
9. 8	37. 30	8. 11	·1112					
9. 20	38. 40	8. 28	·1126					
9. 34	38. 35	8. 43	·1120					
9. 46	39. 10	9. 19	·1125					
10. 2	37. 35	9. 27	·1129					
10. 10	37. 55	9. 38	·1124					
10. 23	36. 15	9. 52	·1127					
10. 38	38. 35	10. 29	·1126					
10. 45	37. 50	10. 58	·1130					
11. 0	39. 25	11. 4	·1133					
11. 8	39. 5	11. 42	·1133					
11. 23	41. 10	12. 0	·1129					
12. 37	39. 30	13. 1	·1128					
12. 53	40. 30	13. 22	·1132					
13. 9	40. 0	13. 48	·1129					
13. 58	40. 45	14. 4	·1131					
14. 7	39. 30	14. 14	·1129					
14. 20	39. 10	14. 41	·1132					
14. 35	41. 15	15. 17	·1129					
14. 45	40. 20	15. 45	·1121					
15. 24	41. 30	16. 17	·1146					
15. 55	40. 20	16. 37	·1148					
16. 37	48. 55	17. 18	·1145					
17. 12	42. 15	17. 46	·1137					
17. 56	41. 0	19. 6	·1131					
18. 7	39. 45	19. 39	·1125					
18. 42	41. 5	19. 45	·1126					
19. 8	40. 45	20. 15	·1121					
19. 22	41. 25	20. 53	·1120					
19. 31	40. 35	21. 21	·1122					
19. 52	41. 30	22. 0	·1116					
20. 22	39. 45	22. 23	·1117					
21. 0	39. 20	23. 15	·1118					
21. 38	44. 35	23. 19	·1119					
21. 49	43. 35		(†)					
22. 7	47. 10							
22. 36	45. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 1 h m	° ′ ″
22. 52	20. 48. 0
23. 0	47. 20
23. 13	48. 25
23. 37	47. 35
23. 47	49. 30
23. 59	49. 15
Nov. 2	
0. 0	20. 49. 15
0. 28	47. 5
0. 51	46. 20
1. 2	47. 15
1. 32	46. 15
2. 2	47. 10
2. 31	45. 5
3. 8	44. 0
3. 12	44. 30
3. 21	43. 50
3. 31	44. 25
4. 25	43. 5
4. 45	43. 45
5. 8	42. 5
5. 17	43. 0
5. 43	39. 30
6. 1	41. 10
6. 22	40. 35
6. 41	43. 25
7. 40	42. 40
7. 47	41. 45
8. 13	42. 30
8. 52	42. 40
9. 28	36. 25
9. 39	36. 0
10. 7	30. 10
10. 27	36. 40
10. 34	36. 20
	***
10. 48	38. 25
11. 16	35. 20
	***
12. 8	40. 0
12. 23	44. 0
13. 0	37. 50
13. 26	40. 30
13. 34	39. 15
13. 42	40. 25
13. 51	39. 15
14. 8	42. 0
14. 51	42. 15
15. 21	47. 0
16. 3	42. 15
16. 13	41. 45
17. 37	42. 55
17. 48	41. 35
17. 53	42. 35
18. 34	42. 0
19. 33	43. 10
19. 46	42. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Nov. 2	
0. 14	·1118
0. 30	·1115
0. 44	·1116
0. 59	·1115
1. 7	·1118
1. 28	·1119
1. 40	·1118
2. 22	·1119
2. 44	·1118
3. 27	·1122
3. 38	·1124
3. 56	·1120
4. 40	·1123
5. 7	·1111
5. 24	·1118
5. 43	·1113
5. 58	·1119
6. 12	·1115
6. 23	·1116
6. 30	·1122
6. 50	·1118
8. 0	·1125
8. 23	·1120
8. 41	·1120
9. 8	·1125
9. 23	·1123
9. 46	·1130
10. 9	·1115
10. 17	·1120
10. 29	·1116
10. 40	·1118
11. 11	·1122
11. 18	·1123
11. 45	·1117
12. 16	·1124
12. 45	·1140
13. 12	·1128
13. 43	·1121
14. 0	·1125
14. 12	·1124
15. 4	·1125
15. 45	·1134
16. 8	·1136
17. 34	·1132
17. 58	·1134
18. 15	·1134
19. 5	·1136
19. 41	·1131
20. 38	·1113

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 2	
0. 0	·03734
2. 42	·03465
2. 58	·03460
3. 21	·03400
4. 7	·03341
5. 4	·03300
7. 13	{·03294 ·03455
8. 31	·03447
10. 18	·03480
11. 25	·03520
12. 31	·03580
13. 9	·03582
15. 17	·03824
15. 58	·03864
19. 7	·04131
22. 42	·04230
23. 45	·04220
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 2		
1. 0	51 ·3	51 ·7
3. 0	53 ·2	53 ·5
Max.	55 ·8	56 ·6
9. 0	52 ·8	52 ·6
18. 0	47 ·5	48 ·1
Min.	45 ·0	44 ·3
21. 0	46 ·0	47 ·0

Greenwich Mean Solar Time.	Western Declination.
Nov. 2 h m	° ′ ″
19. 55	20. 43. 25
20. 2	43. 0
	***
20. 37	45. 0
20. 45	44. 40
20. 57	45. 55
21. 30	45. 15
21. 45	46. 10
22. 11	45. 0
22. 47	45. 0
23. 12	46. 55
23. 20	46. 5
23. 24	47. 0
23. 50	46. 5
23. 59	46. 55
Nov. 3	
0. 0	20. 46. 55
0. 15	47. 50
0. 23	47. 20
0. 59	48. 55
1. 27	46. 55
1. 59	46. 0
2. 12	46. 15
3. 31	44. 0
4. 15	44. 55
4. 33	43. 0
4. 54	38. 5
5. 9	36. 15
5. 24	41. 20
5. 37	41. 15
5. 57	42. 20
6. 7	41. 55
6. 17	43. 25
6. 26	43. 10
6. 37	44. 25
7. 58	42. 0
8. 23	38. 20
8. 38	39. 10
9. 9	32. 10
9. 30	38. 5
9. 56	39. 30
10. 0	39. 5
10. 12	41. 0
10. 30	40. 35
10. 51	38. 20
11. 25	40. 35
12. 2	39. 25
12. 34	41. 5
12. 42	40. 25
13. 41	40. 10
13. 53	41. 10
14. 28	42. 0
14. 49	41. 0
15. 6	41. 0
15. 12	42. 25
15. 25	41. 10
15. 36	42. 30
16. 28	44. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 2 h m	
20. 52	·1115
21. 16	·1115
21. 47	·1118
22. 2	·1116
22. 30	·1118
23. 8	·1116
23. 57	·1121
23. 59	·1120
Nov. 3	
0. 0	·1120
0. 49	·1123
1. 23	·1118
1. 56	·1123
3. 25	·1118
3. 46	·1122
4. 2	·1122
4. 45	·1102
5. 24	·1117
5. 38	·1113
5. 50	·1117
6. 0	·1115
6. 45	·1114
7. 17	·1121
8. 16	·1116
8. 38	·1123
9. 5	·1112
9. 23	·1118
10. 0	·1117
10. 14	·1123
10. 41	·1121
11. 37	·1119
	***
12. 50	·1123
13. 15	·1119
13. 33	·1120
13. 47	·1118
14. 10	·1122
16. 27	·1122
16. 45	·1125
17. 37	·1124
18. 13	·1130
18. 45	·1128
19. 31	·1126
19. 46	·1128
20. 12	·1126
20. 27	·1121
20. 57	·1118
21. 6	·1119
21. 33	·1111
22. 7	·1110

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 3	
	(†)
1. 0	·04194*
1. 7	·04170
2. 13	·04100
4. 30	·03706
7. 16	·03390
9. 0	·03345
9. 27	·03342
10. 50	·03295
15. 17	{·03240 ·03450
17. 9	·03349
21. 5	·03179
22. 12	{·03158 ·03265
23. 45	·03138
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 3		
Min.	47 ·5	48 ·0
1. 0	47 ·8	48 ·2
3. 0	50 ·0	51 ·0
Max.	53 ·8	54 ·5
9. 0	53 ·5	54 ·5
Min.	52 ·8	53 ·2
18. 0	55 ·0	56 ·0
21. 0	55 ·7	57 ·0
22. 0	56 ·3	57 ·8
23. 0	56 ·8	58 ·1
Max.	57 ·5	58 ·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 3		Nov. 3						
h m	° ′ ″	h m		h m		h m	°	°
16. 47	20. 42. 50	23. 22	·1098					
17. 8	42. 0	23. 45	·1100					
17. 31	44. 30	23. 59	·1099					
18. 6	45. 5							
18. 33	44. 25							
18. 41	46. 0							
18. 56	44. 0							
19. 27	42. 10							
19. 42	43. 5							
20. 29	41. 25							
20. 52	43. 25							
21. 23	43. 50							
21. 37	45. 0							
21. 53	44. 35							
22. 6	46. 5							
22. 32	46. 20							
22. 47	45. 40							
23. 59	48. 40							
Nov. 4		Nov. 4		Nov. 4		Nov. 4		
0. 0	20. 48. 40	0. 0	·1099		(†)	0. 0	57 ·7	58 ·8
0. 24	48. 25	0. 17	·1102	0. 10	·03310	1. 0	58 ·5	59
0. 30	47. 25	0. 37	·1100	0. 56	·03248	2. 0	59 ·2	60 ·1
1. 10	48. 20	1. 2	·1105		·03345	3. 0	60 ·0	60 ·9
1. 16	49. 20	1. 11	·1103	3. 21	·03153	6. 0	60 8	61 ·3
1. 32	48. 35	1. 20	·1106	3. 30	·03148	Max.	61 ·2	61 ·8
1. 47	49. 25	1. 45	·1105		·03225	9. 0	60 ·1	60 ·2
2. 13	48. 5	1. 48	·1102	4. 52	·03134	12. 0	59 ·3	60 ·0
2. 22	48. 50	1. 59	·1106	5. 22	·03139	18. 0	58 ·2	59 ·0
2. 29	48. 0	2. 13	·1102	6. 55	·03100	Min.	57 ·0	56 ·6
2. 38	49. 0	2. 22	·1104	7. 17	·03150	21. 0	58 ·0	59 ·0
2. 52	48. 5	2. 32	·1101	7. 43	·03145	22. 0	57 ·6	58 ·7
3. 31	51. 10	3. 6	·1097	8. 23	·03165	23. 0	58 ·0	59 ·0
4. 7	46. 50	3. 13	·1094	11. 0	·03164			
4. 32	46. 55	3. 31	·1093	11. 58	·03136			
5. 0	45. 15	3. 51	·1084	12. 59	·03155			
5. 43	43. 20	4. 24	·1098	13. 30	·03088			
6. 21	42. 40	4. 33	·1099	14. 39	·03100			
7. 22	42. 30	5. 0	·1096	18. 43	·03242			
8. 0	37. 0	5. 59	·1107	19. 16	·03240			
8. 9	37. 0	6. 36	·1107	21. 48	·03303			
8. 23	35. 20	7. 4	·1106	23. 59	·03261			
9. 8	39. 40	7. 22	·1111					
10. 14	40. 15	7. 33	·1108					
10. 47	39. 5	7. 58	·1090					
11. 13	40. 5	8. 12	·1091					
11. 37	36. 35	8. 41	·1105					
11. 57	30. 20	9. 2	·1110					
	***	9. 37	·1110					
12. 17	33. 0	9. 53	·1107					
12. 54	35. 45	10. 28	·1111					
13. 10	33. 20	10. 51	·1106					
13. 19	34. 0	11. 0	·1106					
13. 48	30. 25	11. 16	·1113					
14. 11	36. 10	11. 37	·1110					
14. 43	31. 5	12. 4	·1089					
15. 23	38. 50	12. 13	·1089					
15. 34	37. 35	12. 27	·1097					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 4		Nov. 4						
h m	° ′ ″	h m		h m		h m	°	°
16. 0	20. 41. 5	12. 46	·1073					
16. 13	40. 10	13. 15	·1126					
16. 57	42. 30	13. 39	·1109					
17. 30	42. 40	14. 8	·1107					
17. 40	41. 25	14. 21	·1097					
17. 45	42. 30	14. 48	·1094					
17. 53	41. 15	15. 1	·1105					
18. 0	43. 0	15. 23	·1103					
18. 6	42. 0	15. 30	·1106					
18. 11	43. 55	15. 52	·1104					
18. 19	40. 45		***					
18. 27	42. 50	16. 42	·1110					
18. 38	40. 55	17. 4	·1107					
18. 45	43. 5	17. 43	·1105					
19. 40	43. 30		***					
19. 51	45. 25	18. 15	·1114					
20. 0	43. 55	18. 18	·1106					
20. 10	45. 0	18. 28	·1118					
20. 22	44. 50	18. 37	·1112					
20. 29	49. 10	18. 49	·1119					
20. 42	44. 0	19. 47	·1087					
20. 45	46. 15	19. 52	·1088					
21. 5	42. 50	20. 9	·1078					
21. 21	43. 10	20. 17	·1080					
21. 27	40. 35	20. 28	·1074					
21. 36	42. 10	20. 38	·1084					
22. 2	42. 0	20. 45	·1073					
22. 9	43. 5	21. 0	·1088					
22. 14	42. 30	21. 11	·1082					
22. 20	44. 10	21. 32	·1088					
22. 32	43. 20	21. 38	·1084					
22. 43	46. 25	21. 53	·1096					
22. 57	44. 20	22. 15	·1094					
23. 8	46. 25	22. 20	·1098					
23. 12	46. 0	22. 27	·1095					
23. 47	50. 35	22. 31	·1099					
23. 57	49. 45	22. 45	·1093					
23. 59	49. 50	22. 55	·1098					
		23. 9	·1088					
		23. 19	·1092					
		23. 26	·1089					
		23. 40	·1092					
		23. 59	·1086					
Nov. 5		Nov. 5		Nov. 5		Nov. 5		
0. 0	20. 49. 50	0. 0	·1086	0. 0	·03261	0. 0	58 ·6	59 ·4
0. 14	50. 0	0. 20	·1078	0. 29	·03246	1. 0	59 ·0	60 ·0
0. 24	51. 25	0. 47	·1049	0. 47	·03263	2. 0	59 ·5	60 ·5
0. 44	50. 0	1. 37	·1092	2. 44	·03178	3. 0	60 ·0	61 ·2
1. 2	53. 5	1. 56	·1091		·03212	Max.	61 ·7	62 ·3
1. 18	52. 30	2. 32	·1074	3. 30	·03144	9. 0	60 ·0	61 ·7
1. 26	53. 30	2. 47	·1076	3. 54	·03140	18. 0	55 ·8	56 ·7
1. 37	53. 55	3. 23	·1091	4. 22	·03110	Min.	51 ·4	50 ·7
1. 40	53. 15	3. 37	·1084	4. 37	·03122	21. 0	53 ·0	54 ·7
1. 47	53. 35	3. 55	·1089		·03391			
2. 16	50. 10	4. 9	·1081	6. 47	·03304			
2. 22	50. 5	4. 26	·1093	7. 28	·03316			
2. 46	47. 0	4. 42	·1092	7. 42	·03304			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 5	
h m	° ′ ″
3. 2	20. 46. 0
3. 22	47. 35
3. 42	42. 25
3. 58	45. 25
4. 8	43. 5
4. 31	44. 25
5. 7	41. 30
5. 37	43. 25
5. 45	42. 55
6. 0	43. 50
6. 32	43. 0
6. 47	43. 30
7. 2	41. 55
7. 11	42. 0
7. 22	39. 35
7. 38	37. 25
8. 0	26. 30
8. 23	37. 5
8. 34	37. 35
8. 45	30. 45
9. 0	32. 50
9. 10	28. 20
9. 18	30. 55
9. 32	24. 20
9. 39	25. 55
9. 55	35. 50
10. 18	39. 30
10. 30	39. 40
10. 40	41. 25
10. 45	43. 50
10. 57	44. 5
11. 8	47. 0
11. 38	39. 20
12. 47	41. 55
13. 6	39. 15
13. 19	38. 5
13. 39	47. 10
13. 54	47. 35
14. 12	50. 45
14. 26	48. 5
14. 36	44. 35
14. 43	45. 0
15. 3	41. 5
15. 26	41. 30
15. 35	39. 55
15. 52	42. 55
16. 2	41. 10
16. 45	47. 55
17. 26	48. 10
17. 43	45. 10
18. 17	52. 25
18. 46	51. 0
19. 8	51. 15
19. 18	48. 35
19. 32	49. 35
19. 51	46. 10
20. 0	50. 0
20. 27	52. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 5	
h m	
5. 8	·1097
5. 38	·1098
5. 48	·1102
6. 7	·1095
6. 34	·1102
6. 53	·1090
7. 13	·1091
7. 29	·1093
7. 43	·1082
8. 0	·1098
8. 13	·1096
8. 24	·1089
8. 41	·1111
8. 55	·1108
9. 0	·1106
9. 8	·1111
9. 21	·1086
9. 38	·1099
9. 44	·1100
9. 56	·1093
10. 24	·1096
10. 45	·1108
10. 52	·1107
11. 2	·1115
11. 14	·1110
11. 34	·1106
11. 46	·1110
12. 3	·1106
12. 33	·1107
12. 44	·1110
13. 15	·1104
13. 32	·1115
13. 46	·1111
14. 3	·1111
14. 27	·1099
14. 43	·1107
14. 50	·1106
15. 26	·1111
15. 34	·1108
16. 15	·1133
16. 30	·1136
16. 43	·1131
17. 14	·1108
17. 22	·1110
17. 30	·1106
17. 48	·1116
18. 0	·1111
18. 21	·1110
18. 38	·1099
18. 54	·1097
19. 5	·1099
19. 31	·1086
19. 43	·1076
20. 3	·1091
20. 8	·1088
20. 29	·1095
20. 40	·1088
20. 46	·1095

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 5	
h m	
8. 1	·03314
8. 44	·03296
9. 18	·03263
10. 42	·03305
11. 30	·03284
13. 27	·03382
14. 24	·03352
16. 26	·03535
16. 58	·03559
18 8	·03663
19. 23	·03742
21. 27	·03920
22. 38	·03950
23. 59	·03961

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

Greenwich Mean Solar Time.	Western Declination.
Nov. 5	
h m	° ′ ″
20. 46	20. 51. 10
21. 3	52. 15
21. 31	47. 30
21. 36	48. 5
21. 44	46. 5
21. 49	48. 5
21. 58	45. 55
22. 22	45. 30
22. 26	48. 0
22. 30	45. 5
22. 34	46. 40
22. 52	46. 0
23. 20	48. 55
23. 31	47. 5
23. 38	48. 20
23. 47	47. 55
23. 53	49. 55
23. 59	48. 40
Nov. 6	
0. 0	20. 48. 40
0. 16	47. 15
0. 26	47. 0
0. 37	48. 0
0. 43	46. 25
0. 53	47. 25
1. 16	44. 30
1. 47	46. 20
2. 1	45. 15
2. 32	45. 0
2. 48	47. 25
2. 57	46. 0
3. 19	45. 30
3. 27	47. 0
3. 37	45. 15
3. 48	46. 5
3. 58	44. 40
4. 11	47. 40
4. 30	44. 5
4. 38	34. 10
4. 53	28. 40
5. 1	29. 30
5. 8	29. 20
5. 47	43. 20
5. 57	43. 30
6. 7	45. 15
6. 49	43. 5
7. 2	34. 55
7. 11	35. 35
7. 31	18. 35
7. 44	22. 20
7. 52	19. 25
8. 16	28. 15
8. 29	35. 30
8. 43	36. 5
8. 52	38. 20
8. 56	38. 5
9. 0	38. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 5	
h m	
21. 2	·1099
21. 30	·1087
21. 41	·1093
21. 47	·1090
22. 0	·1100
22. 26	·1102
22. 41	·1106
23. 8	·1107
	(†)
Nov. 6	
	(†)
0. 23	·1098
0. 40	·1099
0. 45	·1094
0. 57	·1100
1. 2	·1094
1. 33	·1107
2. 0	·1104
2. 23	·1107
2. 28	·1106
2. 44	·1110
3. 10	·1103
3. 21	·1104
3. 39	·1098
3. 55	·1105
4. 7	·1112
4. 42	·1059
4. 48	·1062
5. 39	·1109
5. 51	·1106
5. 58	·1109
6. 8	·1106
6. 19	·1107
6. 34	·1100
6. 41	·1107
6. 57	·1096
7. 0	·1106
7. 12	·1115
7. 19	·1107
7. 40	·1128
7. 48	·1112
8. 0	·1128
8. 8	·1122
8. 17	·1132
8. 42	·1105
8. 59	·1103
9. 15	·1136
9. 32	·1130

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 6	
0. 0	·03961
0. 23	·03966
1. 45	·03944
2. 31	·03885
2. 59	·03867
4. 35	·03731
5. 25	·03710
6. 21:	·03619
7. 24	·03618
7. 37	·03600
8. 31	·03638
8. 59	·03642
9. 30	·03680
9. 58	·03670
13. 6	·04033
17. 28	·04155
21. 10:	·04190
23. 32	·04080
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 6		
1. 0	54·0	55·3
3. 0	55·6	56·7
Max.	57·8	58·8
9. 0	53·8	56·0
Min.	46·8	46·2
18. 0	48·0	49·0
21. 0	47·8	49·0

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 6		Nov. 6						
h m	° ′ ″	h m		h m		h m	°	°
9. 10	20. 36. 5	9. 45	·1115					
9. 23	44. 20	9. 53	·1111					
9. 30	43. 55	10. 11	·1119					
9. 38	45. 30	10. 38	·1115					
9. 55	42. 45	10. 53	·1106					
10. 11	38. 45	11. 14	·1103					
10. 24	38. 10	11. 39	·1106					
10. 38	35. 25	11. 53	·1113					
11. 6	38. 45	12. 12	·1115					
11. 28	36. 25	12. 27	·1113					
11. 48	39. 5	12. 38	·1114					
11. 58	41. 25	13. 8	·1108					
12. 37	39. 30	13. 37	·1117					
12. 45	40. 25	14. 8	·1116					
12. 58	39. 30	14. 52	·1120					
13. 43	44. 55	15. 7	·1118					
14. 22	44. 30	16. 0	·1126					
14. 32	44. 10	16. 8	·1129					
14. 48	43. 5	16. 43	·1125					
15. 4	44. 0	17. 5	·1124					
15. 16	43. 5	17. 20	·1130					
15. 33	43. 40	17. 34	·1129					
15. 47	43. 0	17. 49	·1124					
15. 53	44. 5	18. 20	·1123					
16. 12	42. 30	19. 4	·1115					
16. 39	43. 30	19. 54	·1114					
17. 1	46. 5	20. 3	·1118					
17. 37	44. 50	20. 41	·1117					
18. 18	45. 20	20. 58	·1120					
18. 32	48. 10	21. 16	·1116					
18. 45	46. 30		***					
18. 54	47. 15	22. 6	·1112					
19. 18	45. 0	22. 13	·1109					
19. 33	45. 5	22. 33	·1110					
19. 42	43. 55	22. 41	·1106					
19. 54	42. 55	22. 52	·1110					
20. 4	41. 10	23. 2	·1098					
20. 12	42. 5	23. 13	·1103					
20. 16	41. 10		(†)					
20. 34	42. 5							
20. 50	41. 35							
21. 6	43. 5							
21. 12	41. 40							
21. 48	41. 55							
22. 8	44. 5							
22. 18	43. 0							
22. 38	44. 5							
22. 47	43. 20							
23. 3	47. 40							
23. 12	44. 10							
23. 17	45. 5							
23. 43	43. 25							
23. 55	44. 40							
23. 59	43. 35							
Nov. 7		Nov. 7		Nov. 7		Nov. 7		
0. 0	20. 43. 35	0. 0	·1105		(†)	Min.	50·6	51·8
0. 5	45. 5	0. 26	·1108	0. 27	·03980	1. 0	51·6	52·7

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 7		Nov. 7		Nov. 7		Nov. 7		
h m	° ′ ″	h m		h m		h m	°	°
0. 9	20. 43. 25	0. 57	·1102	2. 3	·03846	3. 0	53·9	55·1
0. 25	47. 15	1. 19	·1109		·03815	Max.	55·7	56·3
0. 52	47. 50	1. 43	·1100	2. 58	·03715	9. 0	55·2	56·0
1. 1	46. 25	1. 53	·1107	3. 46	·03520	Min.	53·8	53·5
1. 7	47. 15	2. 19	·1079	4. 38	·03376	22. 27	54·0	54·0
1. 9	46. 25	2. 53	·1109	4. 53	·03360			
1. 24	49. 15	2. 57	·1105	5. 46	·03263			
1. 37	47. 10	3. 14	·1112	9. 43	·03215			
1. 47	46. 30	3. 37	·1103	10. 51	·03182			
2. 0	48. 40	3. 52	·1117	13. 3	·03175			
2. 8	45. 45	4. 22	·1112	18. 54	·03185			
2. 36	40. 30	4. 33	·1102	23. 59	·03229			
2. 44	41. 30	4. 54	·1132					
2. 57	44. 30	5. 15	·1121					
3. 0	42. 15	5. 30	·1120					
3. 17	45. 20	6. 10	·1113					
3. 28	45. 20	6. 31	·1116					
3. 40	42. 0	6. 43	·1107					
4. 0	44. 30	7. 0	·1127					
4. 17	44. 10	7. 23	·1127					
4. 30	41. 55	7. 32	·1130					
4. 34	34. 10	8. 11	·1117					
4. 43	32. 30	8. 17	·1118					
4. 50	36. 15	8. 32	·1115					
5. 7	38. 10	8. 45	·1117					
5. 22	41. 35	9. 30	·1112					
5. 38	43. 35	9. 54	·1127					
6. 8	42. 30	10. 19	·1122					
6. 28	42. 30	10. 33	·1125					
6. 37	39. 55	10. 59	·1117					
6. 45	35. 35	11. 15	·1122					
7. 3	39. 40	12. 10	·1111					
7. 13	39. 0	12. 25	·1114					
7. 25	38. 10	12. 44	·1112					
7. 30	39. 0	13. 16	·1117					
7. 38	37. 50	13. 46	·1113					
7. 45	38. 35	14. 39	·1113					
8. 13	39. 0	15. 42	·1116					
8. 23	41. 0	16. 11	·1115					
8. 34	41. 5	17. 27	·1120					
8. 44	40. 5	17. 53	·1118					
8. 57	40. 55	18. 8	·1121					
9. 3	39. 30	18. 22	·1119					
9. 15	41. 0		***					
9. 34	40. 40	19. 3	·1117					
9. 45	42. 55	19. 12	·1118					
9. 55	44. 0	19. 36	·1117					
10. 1	43. 5	19. 45	·1114					
10. 18	42. 10	20. 8	·1112					
10. 36	43. 30	20. 32	·1111					
11. 2	39. 35	21. 1	·1102					
11. 21	39. 5	21. 47	·1101					
11. 31	38. 20	21. 58	·1104					
12. 38	44. 55	22. 19	·1101					
12. 51	43. 30	22. 27	·1106					
14. 16	40. 55	22. 58	·1102					
14. 37	42. 30		(†)					
15. 34	42. 30	23. 28	·1105					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Nov. 7		Nov. 7						
h m	° ′ ″	h m		h m		h m	°	°
15. 55	20. 41. 55	23. 44	·1105					
16. 20	43. 20	23. 59	·1102					
17. 44	42. 25							
18. 0	42. 55							
18. 25	42. 0							
18. 36	43. 5							
18. 45	42. 5							
18. 57	43. 15							
19. 26	42. 0							
20. 54	41. 55							
21. 3	42. 25							
21. 13	42. 0							
21. 38	42. 5							
21. 58	45. 25							
22. 16	43. 15							
22. 19	44. 30							
22. 47	47. 35							
22. 55	46. 45							
23. 18	47. 10							
23. 28	47. 0							
23. 59	49. 5							
Nov. 8		Nov. 8		Nov. 8		Nov. 8		
0. 0	20. 49. 5	0. 0	·1102	0. 0	·03229	Max.	55 ·0	56 ·0
0. 18	50. 0	0. 21	·1102	2. 1	·03245	8. 49	54 ·0	55 ·8
0. 31	49. 30	0. 57	·1098	2. 40	·03226	18. 0	50 ·0	51 ·0
1. 8	52. 50	1. 10	·1099	3. 14	·03250	Min.	47 ·7	47 ·0
1. 22	50. 10	1. 26	·1095	4. 3	·03237	21. 0	48 ·8	50 ·5
1. 52	47. 30	1. 35	·1098	4. 38	·03237			
2. 15	49. 55	1. 43	·1097	7. 9:	·03221			
2. 26	46. 10	2. 8	·1106	9. 1	·03266			
2. 46	42. 5	2. 30	·1083	9. 27	·03265			
	***	2. 45	·1088	11. 53	·03348			
3. 26	46. 50	3. 15	·1116	12. 31	·03358			
3. 53	45. 30	3. 23	·1113	14. 27	·03459			
4. 2	42. 5	3. 30	·1117	19. 22	·03876			
4. 10	38. 15	3. 48	·1112	21. 51	·04050			
4. 22	35. 50		(†)	23. 59	·03980			
4. 30	40. 5	4. 38	·1115					
4. 44	39. 30	4. 50	·1111					
4. 59	41. 20	5. 18	·1116					
5. 50	43. 40	5. 31	·1115					
6. 12	42. 45	6. 16	·1117					
7. 2	42. 30	7. 38	·1118					
7. 27	41. 35	7. 47	·1120					
7. 52:	42. 25	8. 1	·1119					
8. 11	40. 40	8. 17	·1121					
8. 32	41. 0	8. 32	·1118					
8. 50	40. 20	8. 58	·1132					
8. 59	40. 55	9. 34:	·1118					
9. 33	39. 5	10. 15	·1117					
9. 53	39. 30	10. 25	·1121					
9. 56	40. 35	10. 50	·1114					
10. 10	41. 10	11. 24	·1118					
10. 23	39. 5	11. 37	·1124					
10. 31	39. 20	12. 8	·1125					
11. 1	37. 15	12. 52	·1113					
11. 28	41. 0	12. 57	·1114					
11. 32	40. 40	13. 5	·1108					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Nov. 8		Nov. 8						
h m	° ′ ″	h m		h m		h m	°	°
11. 42	20. 43. 0	13. 17	·1108					
12. 36	36. 35	13. 43	·1117					
13. 17	44. 25	14. 0	·1116					
13. 31	44. 20	14. 17	·1118					
13. 52	47. 0	14. 43	·1116					
14. 23	44. 35	15. 23	·1118					
14. 32	45. 0	15. 33	·1120					
14. 49	44. 15	15. 46	·1118					
15. 2	45. 50	16. 27	·1119					
15. 23	45. 0	16. 38	·1116					
16. 16	44. 25	16. 46	·1116					
16. 34	45. 30	17. 19	·1123					
16. 49	44. 35	17. 42	·1123					
17. 49	43. 25	17. 52	·1127					
17. 59	43. 55	18. 13	·1125					
18. 5	43. 5	18. 28	·1128					
18. 9	43. 55	19. 11	·1127					
18. 17	43. 25	19. 30	·1122					
	***	20. 17	·1116					
19. 42	44. 30	20. 25	·1117					
20. 10	46. 30	20. 45	·1112					
20. 22	45. 10	21. 11	·1116					
20. 27	46. 0	21. 25	·1117					
20. 47	44. 40	21. 48	·1113					
21. 0	45. 30	22. 4	·1112					
21. 11	44. 35	22. 24	·1116					
21. 24	47. 0	22. 29	·1111					
22. 25	51. 20	23. 4	·1106					
22. 32	49. 35	23. 23	·1107					
22. 43	51. 10		(†)					
22. 57	51. 35							
23. 4	49. 55							
23. 23	48. 15							
23. 30	50. 0							
23. 34	49. 10							
23. 44	49. 55							
23. 59	47. 50							
Nov. 9		Nov. 9		Nov. 9		Nov. 9		
0. 0	20. 47. 50	0. 0	·1116	0. 0	·03980	1. 0	52 ·2	54 ·0
	***	0. 17	·1117	1. 6	·03785	3. 0	54 ·8	56 ·0
0. 32	49. 5	0. 32	·1116	1. 32	·03760	Max.	56 ·8	58 ·0
0. 42	48. 15	1. 8	·1113	4. 51:	·03290	9. 0	52 ·6	53 ·9
1. 4	49. 30	1. 24	·1102	6. 31	·03225	18. 0	43 ·0	45 ·0
1. 47	40. 40	1. 41	·1088		·03525	Min.	40 ·6	40 ·0
1. 56	41. 5	1. 57	·1101	9. 13:	·03590	21. 0	41 ·8	43 ·8
2. 11	39. 50	2. 9	·1103	13. 54	·04136			
2. 34	42. 5	2. 25	·1111	17. 7	·04295			
2. 56	47. 5	2. 30	·1111		(†)			
3. 4	46. 45	2. 44	·1117	21. 0	·04444			
3. 15	47. 50	3. 29	·1109					
3. 42	47. 25	4. 5	·1093					
4. 3	39. 20	4. 36	·1103					
4. 17	40. 10	4. 58	·1095					
4. 24	39. 45	5. 33	·1104					
4. 38	42. 55	5. 46	·1099					
4. 51	43. 25	5. 54	·1103					
5. 0	42. 30	6. 6	·1103					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

November 9. The photographic spot of light for the Vertical Force Magnet was off the sheet in the direction of increasing force after $17^h\ 7^m$.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 9		Nov. 9						
h m	° ′ ″	h m		h m		h m	°	°
5. 7	20. 43. 50	6. 30	·1111					
5. 22	42. 10	6. 46	·1109					
5. 35	45. 40	7. 12	·1113					
5. 45	43. 35	7. 39	·1114					
6. 24	41. 35	8. 8	·1120					
6. 40	43. 5	8. 30	·1119					
7. 17	41. 50	8. 42	·1125					
7. 44	41. 25	8. 50	·1123					
8. 2	39. 35	9. 9	·1129					
8. 21	41. 15	9. 34	·1122					
8. 34	38. 15	9. 58	·1120					
8. 46	41. 0	10. 12	·1122					
9. 7	36. 25	10. 47	·1121					
9. 28	40. 10	11. 10	·1125					
9. 46	40. 25	11. 27	·1125					
9. 53	42. 0	11. 53	·1129					
10. 0	41. 0	12. 38	·1125					
11. 23	42. 10	12. 56	·1129					
13. 48	43. 5	13. 5	·1134					
14. 37	50. 40	14. 13	·1122					
15. 22	46. 5	14. 33	·1124					
16. 0	46. 5	14. 55	·1129					
16. 27	44. 0	15. 7	·1129					
17. 38	44. 25	15. 26	·1132					
18. 27	42. 25	15. 42	·1132					
19. 16	43. 35	16. 16	·1137					
19. 38	42. 0	17. 27	·1134					
19. 44	42. 45	20. 12	·1134					
20. 0	41. 10	20. 21	·1133					
		20. 39	·1127					
20. 47	40. 35	21. 49	·1126					
21. 22	41. 15	22. 6	·1122					
21. 31	42. 40	22. 31	·1123					
21. 45	41. 10	23. 23	·1121					
21. 53	42. 25		(†)					
22. 4	40. 45							
22. 42	44. 30							
22. 53	43. 15							
23. 7	45. 20							
23. 17	44. 30							
23. 25	46. 10							
23. 31	45. 30							
23. 33	46. 25							
23. 39	46. 10							
23. 51	47. 20							
23. 59	47. 25							
Nov. 10		Nov. 10		Nov. 10		Nov. 10		
0. 0	20. 47. 25		(†)		(†)	1. 0	45·0	46·8
0. 25	45. 0	0. 38	·1117	0. 45	·04320	3. 0	47·4	48·9
0. 32	45. 20	0. 52	·1117	5. 52:	·03719	Max.	50·3	51·8
0. 40	44. 55	1. 38	·1128	12. 2	·03475	9. 0	49·5	51·5
1. 38	45. 40	1. 51	·1127	15. 24:	·03650	18. 0	44·5	45·4
1. 43	47. 5	1. 58	·1132	21. 9	·04207	Min.	42·5	41·5
1. 53	46. 5	2. 6	·1129		·04100	21. 0	43·2	44·8
1. 59	47. 0	2. 15	·1132	22. 42	·04144	22. 0	43·7	44·8
2. 5	46. 10	2. 39	·1132	23. 59	·04117	23. 0	44·0	45·0
2. 16	46. 0	2. 53	·1128					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 10		Nov. 10						
h m	° ′ ″	h m		h m		h m	°	°
2. 27	20. 47. 0	3. 30	·1129					
2. 40	45. 30	3. 55	·1126					
3. 6	44. 30	4. 16	·1112					
3. 21	45. 35	4. 33	·1112					
3. 30	45. 0	5. 15	·1127					
3. 59	45. 35	5. 38	·1129					
4. 6	45. 0	6. 0	·1129					
4. 33	44. 30	6. 28	·1132					
4. 47	43. 50	6. 55	·1125					
4. 56	44. 15	7. 22	·1126					
5. 8	43. 10	7. 39	·1122					
5. 34	43. 50	7. 55	·1127					
6. 10	41. 30	8. 18	·1127					
6. 37	42. 35	8. 37	·1131					
7. 5	42. 0	8. 46	·1129					
7. 22	40. 35	8. 59	·1131					
7. 40	37. 10	9. 30	·1128					
8. 15	41. 5	10. 8	·1130					
8. 25	40. 5	10. 30	·1126					
8. 53	40. 55	11. 30	·1133					
8. 58	39. 25	12. 38	·1130					
9. 28	40. 10	13. 32	·1131					
9. 42	39. 50	13. 52	·1130					
10. 30	42. 0	15. 27	·1131					
11. 7	41. 15	15. 49	·1129					
11. 23	42. 45	16. 16	·1134					
13. 23	43. 5	17. 6	·1137					
13. 52	44. 5	17. 22	·1134					
15. 18	42. 45	17. 41	·1137					
15. 53	45. 20	18. 2	·1136					
16. 23	45. 0	19. 18	·1135					
16. 45	43. 0	19. 37	·1134					
17. 22	42. 50	20. 9	·1136					
17. 53	41. 30	21. 59	·1118					
18. 45	43. 0	22. 19	·1123					
19. 13	42. 5	22. 30	·1121					
19. 24	42. 25	23. 29	·1123					
19. 46	41. 25		(†)					
20. 26	42. 5							
21. 41	40. 10							
22. 7	40. 50							
22. 15	42. 5							
22. 26	42. 0							
23. 6	43. 5							
23. 24	44. 40							
23. 30	43. 35							
23. 49	47. 0							
23. 59	46. 55							
Nov. 11		Nov. 11		Nov. 11		Nov. 11		
0. 0	20. 46. 55		(†)	0. 0	·04117	0. 0	45·0	46·2
0. 24	47. 25	0. 30	·1128	2. 17	·03997	1. 0	46·5	47·0
0. 32	46. 45	0. 42	·1129	2. 56	·03917	2. 0	47·0	48·3
0. 39	47. 30	0. 49	·1129	3. 13	·03925	3. 0	47·7	49·2
1. 42	46. 45	1. 22	·1127	3. 37	·03862	6. 0	49·0	49·6
2. 14	49. 10	1. 36	·1128	6. 0:	·03747	Max.	50·2	51·3
2. 23	47. 25	2. 10	·1115	9. 23	·03738	9. 0	48·5	47·0
2. 46	45. 0	2. 23	·1119	11. 1	·03730	12. 0	47·0	48·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Sol. Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 11		Nov. 11		Nov. 11		Nov. 11		
h m	° ′ ″	h m		h m		h m	°	°
3. 19	20. 45. 30	3. 15	·1126	14. 11	·03853	18. 0	43·0	44·5
3. 36	44. 50	3. 59	·1125	17. 27	·04090	Min.	40·5	40·7
4. 4	45. 40	4. 6	·1126	22. 24	·04277	21. 0	41·3	43·0
4. 32	44. 5	4. 23	·1124	23. 46	·04260	22. 0	41·3	43·2
4. 53	45. 5	5. 0	·1126		(†)	23. 0	42·0	43·3
5. 10	43. 5	5. 10	·1124					
5. 52	44. 20	5. 30	·1128					
6. 3	43. 25	5. 47	·1127					
6. 55	42. 35	6. 9	·1129					
8. 0	42. 30	6. 30	·1128					
8. 13	41. 25	6. 53	·1130					
8. 28	41. 55	7. 13	·1129					
9. 6	39. 15	9. 28	·1127					
9. 18	39. 10	9. 38	·1128					
9. 57	41. 5	10. 3	·1127					
10. 10	40. 35	10. 15	·1128					
10. 35	40. 50	10. 38	·1134					
10. 58	38. 35	10. 58	·1129					
11. 22	39. 0	11. 5	·1132					
11. 40	41. 0	11. 18	·1130					
12. 10	39. 50	11. 43	·1131					
12. 30	41. 55	11. 53	·1129					
13. 7	42. 10	12. 3	·1131					
13. 27	43. 30	12. 17	·1130					
13. 59	43. 20	14. 6	·1135					
14. 22	44. 30	14. 23	·1138					
14. 40	43. 25	14. 44	·1137					
15. 53	44. 10	15. 38	·1142					
15. 40	43. 10	16. 14	·1145					
16. 8	45. 45	16. 51	·1144					
16. 34	43. 15	17. 9	·1143					
17. 55	41. 50	17. 43	·1144					
	***	18. 22	·1143					
18. 30	43. 10	18. 38	·1141					
19. 38	43. 20	19. 33	·1141					
20. 31	41. 25	20. 30	·1137					
20. 40	42. 5	21. 23	·1134					
20. 47	41. 0	22. 10	·1133					
20. 53	41. 50		(†)					
21. 8	40. 30	23. 7	·1123					
22. 15	42. 25	23. 40	·1124					
22. 30	45. 5	23. 50	·1127					
22. 38	44. 50	23. 59	·1127					
22. 53	47. 10							
23. 13	44. 40							
23. 26	44. 30							
23. 59	45. 35							
Nov. 12		Nov. 12		Nov. 12		Nov. 12		
0. 0	20. 45. 35	0. 0	·1127		(†)	0. 0	43·8	45·0
1. 18	45. 50	0. 39	·1127	1. 0	·04177*	1. 0	44·2	45·2
1. 41	44. 50	2. 0	·1124	1. 8	·04178	2. 0	46·0	47·0
2. 20	45. 10	3. 9	·1126	2. 13	·04037	3. 0	47·0	48·2
3. 32	44. 20	4. 1	·1124	3. 24:	·03810	Max.	50·6	51·6
4. 26	44. 50	4. 43	·1126	5. 19	·03686	9. 0	48·0	49·0
4. 38	44. 5	4. 57	·1127	9. 22:	·03654	18. 0	42·0	43·7
5. 37	43. 15	5. 22	·1126	13. 37	·03799	Min.	39·6	38·8
5. 52	43. 45	5. 59	·1128	16. 47	·04150	21. 0	40·0	42·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 12		Nov. 12		Nov. 12				
h m	° ′ ″	h m		h m		h m	°	°
6. 0	20. 43. 10	6. 32	·1128	19. 38	·04260			
6. 46	42. 25	7. 0	·1131	21. 7	·04300			
6. 59	42. 30	7. 47	·1129		(†)			
7. 43	40. 0	7. 57	·1131	23. 47	·04357			
8. 32	40. 10	8. 46	·1130	23. 59	·04343			
9. 3	41. 30	9. 1	·1131					
9. 36	40. 50	10. 18	·1128					
10. 0	41. 15	10. 31	·1132					
10. 43	40. 0	10. 55	·1131					
11. 13	41. 0	11. 13	·1134					
11. 27	41. 0	11. 28	·1129					
11. 42	41. 15		(†)					
12. 16	36. 55	21. 0	·1139*					
12. 37	40. 45	23. 22	·1133					
13. 3	45. 0	23. 42	·1132					
13. 47	42. 35	23. 59	·1132					
14. 16	42. 10							
14. 50	44. 0							
15. 55	43. 35							
16. 15	44. 0							
17. 14	42. 20							
18. 3	43. 45							
18. 15	42. 55							
18. 30	43. 50							
18. 37	43. 15							
19. 17	43. 50							
19. 27	42. 35							
19. 37	43. 10							
20. 49	41. 10							
21. 26	42. 0							
21. 42	42. 40							
21. 54	42. 0							
22. 56	44. 10							
23. 3	43. 55							
23. 34	45. 10							
23. 59	45. 0							
Nov. 13		Nov. 13		Nov. 13		Nov. 13		
0. 0	20. 45. 0	0. 0	·1132	0. 0	·04343	1. 0	43·6	44·8
0. 10	45. 35	1. 8	·1132	1. 53:	·04190	3. 0	47·3	48·7
1. 51	44. 35	1. 58	·1131	3. 30	·03790	Max.	51·8	53·0
2. 37	43. 30	2. 11	·1132	5. 0	·03658	9. 0	49·8	51·0
3. 22	43. 10	3. 23	·1129	6. 8	·03622	Min.	48·9	48·9
3. 32	43. 45	3. 40	·1133	9. 0	·03588	18. 0	49·8	50·1
3. 58	44. 15	3. 58	·1132	10. 13	·03607	21. 0	49·9	50·1
4. 13	43. 35	4. 11	·1133	11. 44	·03578			
4. 23	44. 10	4. 58	·1122	12. 43	·03570			
4. 43	42. 5	5. 15	·1124	13. 16	·03544			
5. 2	43. 50	5. 42	·1134	13. 48	·03558			
5. 14	42. 50	6. 15	·1126	14. 26	·03540			
5. 22	43. 30	6. 26	·1124	15. 23	·03565			
5. 33	43. 30	6. 30	·1126	21. 13	·03546			
5. 54	45. 20	6. 42	·1121	21. 25	·03570			
6. 28	43. 25	7. 3	·1125	22. 15	·03546			
7. 0	44. 45	7. 19	·1124	23. 59	·03515			
7. 16	43. 5	7. 32	·1132					
7. 37	42. 30	7. 44	·1133					
7. 48	43. 55	8. 3	·1121					

The Horizontal Forces are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

November 12.—The Photographic Trace of the Horizontal Force was lost from $11^h.\ 28^m.$ to $23^h.\ 22^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 13		Nov. 13						
h m	° ′ ″	h m		h m		h m	°	°
8. 1	20. 41. 50	8. 20	·1127					
8. 17	41. 55	8. 26	·1124					
8. 41	36. 20	8. 30	·1127					
9. 8	36. 55	8. 42	·1114					
9. 13	35. 5	8. 53	·1114					
9. 27	34. 35	9. 0	·1117					
9. 37	32. 5	9. 23	·1109					
9. 42	33. 0	9. 29	·1111					
9. 49	33. 0	9. 38	·1106					
10. 0	31. 40		***					
10. 21	35. 0	10. 0	·1106					
10. 52	38. 40	10. 11	·1113					
10. 58	39. 50	10. 25	·1111					
11. 8	38. 25	10. 42	·1112					
11. 13	38. 30	11. 0	·1119					
11. 25	37. 10	11. 17	·1116					
11. 37	39. 40	11. 38	·1123					
11. 47	39. 0	11. 45	·1118					
13. 0	45. 5	12. 12	·1117					
13. 16	43. 20	12. 33	·1126					
13. 38	38. 15	12. 45	·1126					
14. 14	47. 10	12. 59	·1129					
14. 23	46. 15	13. 41	·1124					
14. 58	41. 30	13. 57	·1132					
15. 6	41. 55	14. 43	·1122					
15. 13	41. 25	15. 20	·1123					
15. 38	43. 10	15. 51	·1129					
15. 56	41. 40	16. 0	·1129					
16. 12	41. 10	16. 8	·1132					
16. 17	41. 50	16. 20	·1132					
16. 26	40. 30	16. 32	·1129					
16. 52	41. 20	17. 28	·1131					
16. 57	42. 30	17. 46	·1127					
17. 17	41. 30	18. 15	·1134					
17. 38	41. 35	18. 26	·1132					
17. 54	45. 20	18. 33	·1133					
18. 15	43. 10	18. 54	·1124					
18. 22	44. 5	19. 11	·1121					
18. 30	43. 0	19. 22	·1122					
18. 52	42. 25	19. 28	·1120					
19. 2	43. 25	19. 41	·1124					
19. 28	43. 50	19. 46	·1121					
19. 37	44. 45	20. 21	·1127					
19. 48	43. 20	20. 32	·1126					
19. 57	45. 0	20. 42	·1119					
20. 3	43. 55	20. 55	·1119					
20. 14	44. 25	21. 15	·1121					
20. 26	42. 35	21. 28	·1123					
20. 31	42. 10	21. 45	·1120					
20. 38	42. 15	21. 55	·1122					
20. 43	43. 50	22. 10	·1117					
20. 56	42. 30	22. 30	·1114					
21. 13	41. 35		(†)					
21. 32	42. 5							
21. 38	43. 5							
21. 52	43. 5							
22. 5	45. 30							
22. 27	45. 10							
Nov. 13								
h m	° ′ ″							
23. 12	20. 48. 0							
23. 17	47. 10							
23. 55	49. 30							
23. 59	49. 5							
Nov. 14		Nov. 14		Nov. 14		Nov. 14		
0. 0	20. 49. 5		(†)	0. 0	·03515	1. 0	52 ·5	53 ·0
0. 11	50. 25	1. 0	·1115	1. 38	·03467	3. 0	53 ·9	54 ·1
0. 17	49. 40	1. 39	·1104	3. 43	·03510	Max.	54 ·7	55 ·3
0. 48	48. 55	1. 58	·1086	4. 23	·03486	6. 0	53 ·5	54 ·0
1. 0	50. 25	2. 22	·1088	4. 43	·03558	Min.	49 ·9	49 ·6
1. 16	48. 20	2. 48	·1108	5. 30	·03470	22. 9	51 ·0	51 ·2
1. 42	49. 40	3. 0	·1096	6. 8	·03457			
1. 52	48. 30	3. 14	·1104	6. 28	·03463			
2. 18	52. 25	3. 43	·1097	6. 53	·03450			
2. 29	51. 50	3. 58	·1109	7. 40	·03477			
2. 37	49. 55	4. 15	·1095	7. 47	·03500			
2. 49	53. 35	4. 37	·1085	7. 52	·03580			
2. 57	53. 10	4. 44	·1089	8. 0	·03404			
3. 1	51. 35	4. 53	·1075	8. 5	·03419			
3. 15	53. 25	5. 12	·1099	8. 26	·03547			
3. 18	55. 5	5. 34	·1099	8. 31	·03395			
3. 22	54. 5	5. 59	·1090	8. 41	·03320			
3. 30	55. 40	6. 11	·1104	9. 0	·03360			
3. 34	54. 50	6. 30	·1002	9. 11	·03355			
3. 45	56. 0	7. 0	·1100	9. 17	·03365			
3. 57	52. 20	7. 37	·1084	9. 40	·03330			
4. 4	56. 0	8. 18	·1114	10. 37	·03374			
4. 16	49. 5	8. 28	·1076	11. 23	·03364			
4. 28	46. 15	8. 35	·1066	13. 27	·03404			
4. 38	38. 40	9. 8	·1164	14. 13	·03379			
4. 46	39. 30	9. 45	·1090	14. 24	·03382			
4. 57	27. 35	9. 56	·1096	14. 41	·03336			
5. 29	43. 45	10. 10	·1093	15. 9	·03341			
5. 42	44. 25	10. 25	·1100	15. 32	·03330			
5. 55	49. 10	10. 43	·1103	16. 12	·03306			
6. 7	45. 25	11. 10	·1102	18. 8	·03470			
6. 31	44. 50	11. 23	·1104	18. 37	·03483			
6. 53	42. 0	11. 37	·1101	19. 2	·03474			
7. 4	39. 5	12. 22	·1110	20. 3	·03541			
7. 13	40. 15	12. 32	·1105	21. 17	·03580			
7. 33	39. 35	13. 7	·1106	22. 45	·03655			
7. 45	35. 5	13. 35	·1105	23. 59	·03649			
7. 54	35. 25	13. 40	·1114					
8. 13	25. 30	13. 59	·1115					
8. 43	53. 0	14. 26	·1105					
9. 1	46. 55	14. 45	·1122					
9. 23	32. 35	14. 55	·1118					
9. 28	32. 55		(†)					
9. 38	25. 55	16. 10	·1115					
9. 55	35. 50	16. 39	·1120					
10. 11	28. 30	16. 58	·1116					
10. 23	29. 30	17. 15	·1097					
10. 30	28. 15	17. 22	·1105					
11. 2	38. 25	17. 31	·1100					
11. 20	39. 35	17. 42	·1104					
11. 29	39. 15	18. 28	·1089					
12. 13	43. 0	18. 48	·1105					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 14		Nov. 14						
h m	° ′ ″	h m		h m		h m	°	°
12. 25	20. 42. 55	18. 57	·1100					
12. 33	44. 0	19. 0	·1103					
12. 36:	41. 40	19. 15	·1095					
13. 9	44. 20	19. 38	·1089					
13. 38	38. 55		(†)					
13. 48	40. 30	21. 0	·1092					
13. 53	40. 40	21. 35	·1082					
14. 6	49. 5	21. 36	·1060					
14. 12	49. 30	21. 45	·1066					
14. 23	45. 40	21. 56	·1065					
14. 30	46. 15	22. 13	·1067					
14. 52	40. 5		(†)					
14. 58	40. 15							
15. 43	59. 55							
16. 15	51. 5							
16. 27	51. 35							
16. 3[illegible]	51. 10							
16. 56	54. 30							
17. 15	44. 40							
17. 23	45. 55							
17. 26	45. 10							
17. [illegible]	46. 10							
17. 48	42. 35							
17. 58	49. 10							
18. 13	53. 40							
18. 28	59. 50							
18. 34	58. 0							
18. 38	58. 50							
18. 47	50. 50							
19. 13	43. 30							
19. 19	45. 0							
19. 26	42. 30							
19. 36	45. 15							
19. 42	44. 15							
19. 58	48. 25							
20. 4	48. 5							
20. 13	50. 50							
20. 23	51. 35							
20. 36	48. 10							
20. 40	48. 40							
20. 47	48. 15							
20. 57	48. 5							
21. 4	47. 40							
21. 12	48. 20							
21. 23	47. 15							
21. 28	47. 30							
21. 36	45. 50							
21. 39	46. 5							
21. 53	43. 40							
22. 42	48. 25							
22. 47	49. 25							
22. 55	48. 30							
	(†)							
23. 42	45. 25							
23. 57	49. 40							
23. 59	49. 5							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 15		Nov. 15		Nov. 15		Nov. 15		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 49. 0		(†)	0. 0	·03649	1. 0	52 ·0	52 ·7
0. 3	49. 0	0. 15	·1100	0. 45	·03656	Max.	53 ·7	54 ·7
0. 10	47. 45	0. 38	·1100	2. 38	·03585	8. 0	53 ·7	54 ·7
0. 17	49. 40	0. 54	·1102	2. 45	·03606	18. 0	52 ·1	53 ·3
0. 22	49. 0	1. 16	·1096	3. 14	·03494	Min.	51 ·3	51 ·2
0. 32	51. 25	1. 30	·1089	4. 38	·03478	21. 0	52 ·0	53 ·0
0. 38	50. 25	2. 6	·1085	4. 53	·03500			
	***	2. 21	·1096	5. 45	·03430			
0. 55	51. 15	2. 30	·1090	7. 37	·03397			
1. 10	48. 30	3. 0	·1106	7. 55	·03400			
1. 24	49. 30	3. 12	·1101		·03620			
1. 37	48. 45	3. 21	·1107	10. 2	·03517			
1. 59	49. 25	3. 25	·1106	10. 30	·03520			
2. 3	50. 0	3. 37	·1114	12. 52	·03487			
2. 14	47. 55	3. 54	·1105	13. 53	·03517			
2. 23	50. 0	4. 9	·1110	14. 23	·03502			
2. 31	47. 45	4. 42	·1082	16. 8	·03522			
2. 39	47. 50	4. 59	·1130	17. 29	·03559			
2. 45	51. 55	5. 14	·1137	21. 30	·03638			
2. 56	45. 55	5. 41	·1106	22. 29	·03638			
3. 1	46. 30	5. 54	·1101	23. 59	·03530			
3. 8	45. 25	6. 2	·1105					
3. 13	42. 50	6. 32	·1099					
3. 16	44. 0	7. 6	·1116					
3. 23	43. 0	7. 20	·1115					
3. 33	44. 50	7. 45	·1108					
3. 45	45. 10	8. 0	·1116					
3. 56	43. 55	8. 19	·1113					
4. 22	42. 55	8. 42	·1112					
4. 46	14. 55	9. 19	·1115					
5. 23	40. 10	9. 38	·1124					
5. 31	38. 40	9. 51	·1117					
5. 38	38. 35	10. 7	·1116					
5. 44	41. 10	10. 15	·1119					
5. 58	38. 50	11. 15	·1113					
6. 23	43. 50	12. 0	·1113					
6. 34	42. 10	12. 29	·1120					
6. 49	41. 10	12. 58	·1109					
6. 57	38. 15	13. 24	·1102					
7. 3	40. 30	13. 40	·1103					
7. 24	42. 0	14. 2	·1110					
7. 34	41. 30	14. 19	·1108					
7. 59	35. 50	14. 55	·1110					
8. 10	38. 0	15. 12	·1103					
8. 30	38. 15	15. 38	·1112					
8. 39	39. 25	15. 57	·1115					
9. 27	38. 25	16. 17	·1111					
9. 43	40. 55	16. 40	·1111					
9. 55	39. 5	16. 54	·1112					
10. 6	34. 45	17. 7	·1111					
10. 17	34. 20	17. 21	·1113					
10. 33	38. 0	18. 8	·1112					
10. 55	39. 20	18. 34	·1115					
11. 38	35. 40	19. 0	·1116					
11. 48	36. 5	19. 13	·1113					
12. 8	40. 15	19. 43	·1113					
12. 16	40. 40	20. 18	·1103					
12. 30	40. 5	20. 28	·1107					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 15		Nov. 15						
h m	° ′ ″	h m		h m		h m	°	°
12. 40	20. 40. 20	20. 40	·1099					
12. 59	36. 25	20. 55	·1105					
13. 10	36. 0	21. 22	·1105					
13. 35	37. 25	21. 46	·1103					
13. 38	37. 5	22. 3	·1098					
14. 0	40. 25	22. 25	·1096					
14. 7	42. 25	22. 44	·1100					
14. 15	43. 15	22. 51	·1092					
14. 24	42. 15		(†)					
14. 30	42. 55	23. 50	·1090					
14. 38	42. 10	23. 59	·1092					
14. 50	44. 20							
15. 1	43. 25							
15. 11	44. 35							
15. 22	43. 15							
15. 38	45. 40							
15. 58	44. 10							
16. 16	45. 25							
16. 23	44. 30							
16. 45	46. 5							
17. 12	45. 0							
17. 28	47. 20							
17. 38	44. 45							
17. 40	45. 45							
17. 47	44. 40							
17. 58	46. 25							
18. 24	46. 15							
18. 47	48. 15							
19. 10	47. 15							
19. 17	46. 0							
19. 37	44. 50							
20. 13	45. 5							
20. 27	42. 0							
20. 32	44. 40							
20. 42	42. 5							
20. 47	41. 20							
21. 3	43. 35							
21. 19	42. 10							
21. 32	44. 15							
21. 51	44. 25							
22. 15	43. 20							
22. 34	44. 50							
22. 39	46. 55							
22. 52	44. 30							
23. 11	45. 55							
23. 59	45. 0							
Nov. 16		Nov. 16		Nov. 16		Nov. 16		
0. 0	20. 45. 0	0. 0	·1092	0. 0	·03530	1. 0	55 ·2	56 ·3
0. 12	47. 0	0. 9	·1097	1. 56	·03517	3. 0	57 ·1	58 ·0
0. 22	45. 25	0. 22	·1098	3. 45	·03246	Max.	58 ·9	59 ·7
0. 43	46. 25	0. 38	·1102		·03400	9. 0	57 ·3	58 ·4
0. 53	45. 10	0. 54	·1100	5. 23	·03262	18. 0	55 ·0	56 ·0
1. 45	47. 5	1. 13	·1103	5. 37	·03274	Min.	53 ·4	53 ·2
2. 7	46. 0	2. 5	·1099	6. 47	·03220	21. 0	54 ·0	55 ·6
2. 32	46. 10	2. 42	·1101		·03340			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 16		Nov. 16		Nov. 16				
h m	° ′ ″	h m		h m		h m	°	°
2. 45	20. 45. 25	3. 14	·1099	8. 9	·03296			
3. 2	44. 50	3. 31	·1102	13. 55	·03325			
3. 15	43. 30	3. 47	·1101	21. 30	·03524			
3. 32	43. 15	4. 10	·1106	22. 24	·03530			
3. 43	39. 45	4. 35	·1102	23. 59	·03502			
3. 52	38. 15	5. 1	·1109					
4. 2	34. 50	5. 23	·1108					
		5. 40	·1109					
4. 33	35. 40	6. 3	·1107					
4. 44	34. 35	6. 23	·1108					
4. 50	36. 45	6. 55	·1109					
5. 7	37. 5	7. 12	·1110					
5. 54	42. 35	7. 32	·1108					
6. 4	42. 5	8. 7	·1112					
6. 22	42. 35	8. 23	·1111					
7. 1	40. 45	8. 30	·1113					
8. 3	41. 45	8. 44	·1111					
8. 39	40. 30	8. 59	·1111					
9. 0	40. 55	9. 16	·1109					
9. 27	40. 10	9. 52	·1110					
9. 41	41. 5	10. 13	·1106					
9. 49	40. 10	10. 23	·1110					
9. 57	40. 45	10. 36	·1109					
10. 16	39. 45	11. 0	·1115					
10. 32	40. 0	11. 22	·1115					
10. 50	41. 10	11. 34	·1122					
11. 30	40. 55	11. 59	·1113					
11. 51	39. 25	12. 17	·1114					
12. 17	39. 15	12. 32	·1125					
12. 36	41. 30	13. 14	·1109					
13. 6	39. 10	13. 27	·1108					
13. 38	43. 0	13. 41	·1115					
14. 0	41. 30	13. 50	·1116					
14. 24	42. 30	14. 30	·1113					
14. 47	41. 5	15. 23	·1110					
15. 4	42. 15	16. 3	·1113					
15. 13	41. 50	16. 28	·1112					
15. 55	42. 55	16. 37	·1115					
16. 20	42. 30	16. 48	·1114					
16. 41	43. 20	17. 40	·1117					
16. 55	42. 30	18. 11	·1116					
18. 23	42. 20	18. 26	·1117					
18. 37	43. 15	18. 56	·1112					
18. 53	42. 35	19. 30	·1114					
19. 29	43. 0	19. 38	·1111					
19. 37	42. 5	19. 44	·1114					
20. 17	42. 5	20. 2	·1111					
20. 28	41. 30	20. 30	·1111					
20. 31	42. 40	20. 59	·1110					
21. 18	42. 5	21. 8	·1107					
21. 29	43. 10	21. 35	·1111					
21. 40	42. 20	21. 45	·1110					
22. 6	43. 40	22. 2	·1111					
22. 15	45. 5	22. 53	·1105					
22. 23	44. 35	23. 5	·1107					
22. 50	45. 20	23. 37	·1096					
22. 56	46. 5	23. 59	·1103					
23. 0	45. 30							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
Nov. 16 h m	° ′ ″	h m		h m		h m	°	°
23. 33	20. 44. 5							
23. 59	45. 35							
Nov. 17		Nov. 17		Nov. 17		Nov. 17		
0. 0	20. 45. 35	0. 0	·1103	0. 0	·03502	1. 0	55 ·4	56 ·6
1. 27	45. 20	0. 6	·1103	1. 28	·03460	3. 0	57 ·0	58 ·0
1. 42	47. 35		(†)	1. 43	·03460	Max.	58 ·3	59 ·0
1. 53	49. 50	0. 44	·1107	2. 30	·03410	9. 0	57 ·0	58 ·0
2. 11	45. 10	1. 8	·1112	3. 43	·03282	18. 45	54 ·1	55 ·0
2. 28	44. 10	1. 18	·1111	3. 57	·03267	Min.	52 ·4	52 ·2
2. 38	45. 40	1. 38	·1092		·03559	21. 0	53 ·3	54 ·6
3. 19	45. 35	1. 51	·1090	5. 56	·03435	22. 0	53 ·3	54 ·5
3. 31	46. 40	2. 3	·1089	7. 15	·03426	23. 0	54 ·0	55 ·0
4. 49	43. 5	2. 32	·1104	12. 15	·03520			
5. 22	43. 15	3. 31	·1111	12. 43	·03500			
6. 7	39. 55	3. 42	·1110	20. 0	·03764			
6. 22	38. 30	4. 28	·1114	21. 57	·03800			
6. 31	39. 5	4. 37	·1117	23. 59	·03785			
6. 41	40. 35	4. 42	·1116					
6. 54	41. 5	4. 55	·1118					
7. 10	42. 15	5. 10	·1117					
8. 32	41. 0	5. 32	·1107					
8. 41	41. 45	5. 51	·1110					
9. 42	40. 40	6. 41	·1118					
10. 10	41. 25	7. 20	·1115					
10. 30	40. 50	7. 57	·1113					
10. 43	41. 45	8. 8	·1113					
11. 8	41. 15	8. 42	·1115					
11. 58	41. 30	9. 8	·1116					
12. 17	45. 55	9. 22	·1115					
13. 0	40. 30	9. 44	·1115					
13. 25	42. 30	10. 14	·1113					
13. 48	41. 15	10. 30	·1117					
14. 0	41. 55	10. 53	·1115					
14. 10	41. 15	11. 52	·1115					
14. 16	42. 55	12. 22	·1131					
15. 4	41. 40	12. 55	·1120					
17. 4	42. 30	13. 14	·1117					
17. 17	43. 5	13. 39	·1115					
17. 46	41. 15	14. 30	·1114					
19. 7	43. 5	14. 58	·1116					
19. 31	42. 5	15. 57	·1117					
19. 53	42. 30	16. 8	·1116					
20. 17	41. 30	16. 22	·1118					
21. 22	42. 5	16. 34	·1117					
22. 8	42. 55	17. 0	·1119					
22. 34	44. 15	17. 23	·1121					
22. 43	43. 55	17. 47	·1119					
22. 52	45. 15	18. 57	·1123					
23. 59	45. 0	19. 38	·1121					
		20. 13	·1121					
		21. 21	·1113					
		21. 43	·1113					
		21. 55	·1114					
		22. 21	·1108					
		22. 43	·1111					
		22. 56	·1108					
		22. 59	·1111					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Nov. 17 h m		h m		h m	°	°
		23. 52	·1111					
		23. 59	·1110					
Nov. 18		Nov. 18		Nov. 18		Nov. 18		
0. 0	20. 45. 0	0. 0	·1110	0. 0	·03785	0. 0	54 ·0	55 ·0
0. 39	46. 10	2. 8	·1112	2. 28	·03720	1. 0	54 ·0	55 ·0
1. 22	44. 50	2. 18	·1110	4. 22	·03602	3. 0	55 ·0	56 ·0
1. 40	44. 45	2. 39	·1112	4. 45	·03534	6. 0	55 ·0	56 ·0
2. 25	43. 10	3. 48	·1113		·03760	Max.	55 ·0	56 ·0
4. 41	41. 55	4. 45	·1117	6. 44	·03734	9. 0	54 ·0	55 ·4
5. 6	41. 0	5. 4	·1114	18. 52	·03860	12. 0	53 ·5	54 ·8
5. 55	41. 0	5. 41	·1119	22. 30	·03882	18. 0	52 ·5	54 ·0
6. 18	42. 0	6. 8	·1120	23. 59	·03840	Min.	51 ·5	51 ·3
6. 29	41. 30	6. 28	·1119			21. 0	52 ·5	53 ·8
7. 7	41. 50	6. 38	·1120			22. 0	52 ·7	54 ·0
7. 18	41. 5	7. 13	·1116			23. 0	53 ·0	54 ·3
7. 47	39. 50	7. 22	·1116					
9. 7	39. 30	7. 41	·1112					
10. 4	41. 5	8. 0	·1117					
10. 40	39. 10	8. 13	·1114					
11. 22	41. 20	8. 40	·1112					
11. 32	41. 10	8. 53	·1115					
11. 45	43. 45	9. 28	·1119					
12. 35	42. 5	9. 45	·1116					
13. 3	42. 0	10. 33	·1122					
13. 13	42. 45	11. 1	·1118					
13. 38	42. 5	11. 12	·1122					
15. 6	42. 30	11. 22	·1121					
18. 38	41. 10	11. 35	·1126					
21. 0	42. 5	11. 48	·1124					
21. 47	43. 45	11. 57	·1125					
22. 0	42. 50	12. 26	·1122					
22. 12	44. 35	13. 30	·1119					
22. 28	44. 15	16. 28	·1126					
23. 6	46. 30	16. 56	·1125					
23. 32	46. 50	18. 1	·1128					
23. 41	46. 0	19. 7	·1127					
23. 47	46. 30	20. 9	·1126					
23. 57	46. 0	20. 59	·1122					
23. 59	46. 20	22. 0	·1119					
		22. 10	·1122					
		22. 25	·1121					
		23. 9	·1122					
		23. 43	·1119					
		23. 57	·1120					
		23. 59	·1121					
Nov. 19		Nov. 19		Nov. 19		Nov. 19		
0. 0	20. 46. 20	0. 0	·1121	0. 0	·03840	0. 0	53 ·9	55 ·1
0. 8	47. 25	0. 22	·1121	3. 30	·03481	1. 0	54 ·8	56 ·0
0. 29	46. 0	0. 38	·1122	4. 23	·03367	3. 0	56 ·5	57 ·5
0. 51	46. 30	1. 42	·1120		·03540	Max.	58 ·2	58 ·7
1. 3	45. 45	2. 23	·1116	6. 17	·03430	9. 0	56 ·1	57 ·0
1. 26	46. 40	2. 47	·1115	6. 39	·03440	18. 0	52 ·0	53 ·6
1. 38	45. 10	3. 8	·1101		·03535	Min.	50 ·7	50 ·3
1. 54	46. 5	3. 16	·1101	7. 58	·03518	21. 0	51 ·7	53 ·0
2. 2	45. 20	3. 44	·1098	10. 12	·03578			
2. 17	45. 5	3. 54	·1102	10. 37	·03570			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ; attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 19		Nov. 19		Nov. 19				
h m	° ′ ″	h m		h m		h m	°	°
2. 46	20. 46. 10	4. 4	·1099	12. 27	·03625			
2. 53	46. 0	4. 12	·1102	16. 38	·03850			
3. 0	46. 10	4. 25	·1090	20. 1	·03921			
3. 9	44. 30	4. 45	·1100	21. 27	·03930			
3. 13	45. 0	5. 3	·1103	22. 39	·03940			
3. 23	44. 25	5. 17	·1100	23. 59	·03895			
3. 34	46. 0	5. 32	·1109					
3. 47	49. 5	5. 39	·1109					
4. 11	50. 20	6. 15	·1117					
4. 28	46. 10	7. 0	·1116					
4. 46	45. 0	7. 8	·1118					
4. 53	45. 40	7. 16	·1116					
4. 58	44. 55	7. 28	·1117					
5. 1	46. 0	7. 47	·1117					
5. 15	43. 55	8. 16	·1121					
5. 23	43. 50	8. 33	·1117					
5. 33	42. 50	8. 43	·1118					
6. 18	43. 0	8. 53	·1115					
6. 32	43. 45	9. 6	·1118					
7. 32	41. 55	9. 28	·1105					
8. 18	41. 25	9. 45	·1114					
8. 27	42. 25	10. 8	·1110					
8. 33	42. 0	10. 22	·1117					
8. 43	42. 35	10. 42	·1115					
8. 58	41. 55	11. 1	·1114					
9. 3	42. 30	11. 29	·1117					
9. 40	34. 0	11. 37	·1116					
9. 44	34. 5	11. 45	·1118					
9. 52	33. 30	12. 0	·1114					
10. 1	34. 40	12. 19	·1115					
10. 15	39. 0	12. 37	·1118					
10. 38	38. 10	12. 58	·1115					
10. 45	39. 5	13. 12	·1116					
10. 57	38. 25	13. 36	·1113					
11. 27	41. 40	13. 47	·1116					
11. 45	39. 35	13. 57	·1114					
12. 30	41. 40	14. 27	·1116					
12. 53	40. 25	14. 32	·1118					
12. 58	41. 10	15. 2	·1116					
13. 9	40. 40	15. 12	·1119					
13. 16	39. 25	15. 19	·1117					
13. 28	41. 10	15. 43	·1120					
13. 58	38. 55	16. 11	·1117					
14. 18	41. 5	16. 22	·1122					
14. 30	40. 10	17. 0	·1121					
14. 36	41. 20	17. 45	·1120					
14. 57	40. 25	18. 33	·1125					
15. 8	39. 10	20. 37	·1121					
15. 13	40. 10	21. 0	·1116					
15. 23	38. 55	22. 13	·1116					
15. 31	40. 5	22. 39	·1114					
15. 58	41. 25	22. 57	·1116					
16. 11	40. 35	23. 45	·1117					
16. 25	42. 0	23. 59	·1118					
16. 34	41. 15							
16. 47	41. 40							
17. 1	41. 5							
17. 48	40. 50							
Nov. 19								
h m	° ′ ″	h m		h m		h m	°	°
18. 1	20. 42. 0							
18. 48	41. 45							
19. 39	41. 40							
19. 47	41. 5							
19. 57	41. 35							
20. 56	41. 45							
22. 42	46. 0							
23. 38	45. 20							
23. 59	46. 5							
Nov. 20		Nov. 20		Nov. 20		Nov. 20		
0. 0	20. 46. 5	0. 0	·1118	0. 0	·03895	1. 0	53 ·4	54 ·8
0. 40	44. 50	0. 14	·1122	2. 59	·03698	3. 0	54 ·6	56 ·1
1. 39	44. 25	0. 57	·1124	6. 7	·03387	Max.	56 ·0	57 ·0
2. 37	43. 5	1. 4	·1122	6. 57	·03346	9. 0	55 ·0	57 ·0
5. 21	41. 40	1. 28	·1124		·03558	18. 0	51 ·8	52 ·9
5. 43	42. 35	3. 24	·1118	9. 7	·03537	Min.	50 ·6	50 ·3
5. 58	41. 45	4. 13	·1122	17. 17	·03935	21 ·0	51 ·2	52 ·2
6. 18	42. 0	4. 45	·1121	17. 41	·03929			
6. 32	41. 5	5. 38	·1124	22. 33	·03957			
7. 0	42. 0	5. 50	·1120	23. 59	·03870			
7. 29	41. 0	7. 13	·1119					
7. 52	41. 30	7. 44	·1120					
8. 16	40. 50	8. 28	·1120					
10. 31	40. 15	8. 58	·1119					
11. 1	40. 30	10. 52	·1120					
11. 17	41. 30	11. 9	·1126					
11. 32	40. 30	11. 22	·1123					
11. 41	41. 5	12. 24	·1119					
12. 6	40. 5	13. 9	·1118					
12. 32	42. 0	13. 17	·1120					
12. 43	41. 25	13. 47	·1119					
12. 57	41. 45	14. 12	·1119					
13. 11	41. 55	14. 24	·1118					
13. 20	42. 25	14. 38	·1121					
13. 48	41. 0	14. 56	·1122					
14. 8	40. 35	15. 6	·1124					
14. 17	41. 30	15. 30	·1120					
14. 30	40. 35	15. 45	·1121					
14. 42	42. 15	15. 58	·1120					
14. 59	41. 45	18. 8	·1123					
15. 13	42. 20	18. 51	·1121					
15. 30	40. 20	19. 21	·1122					
15. 43	39. 30	19. 56	·1119					
16. 16	40. 50	20. 19	·1120					
16. 57	39. 45	20. 35	·1117					
17. 15	41. 40	21. 41	·1115					
17. 31	40. 25	21. 58	·1113					
17. 42	38. 55	22. 36	·1115					
18. 9	39. 5	22. 44	·1112					
18. 45	40. 50	22. 55	·1115					
19. 3	39. 45	23. 43	·1115					
20. 0	39. 15	23. 59	·1113					
20. 13	39. 30							
20. 16	40. 5							
20. 27	39. 5							
20. 50	39. 55							
20. 58	39. 15							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 20								
h m	° ′ ″	h m		h m		h m	°	°
21. 22	20. 41. 45							
21. 31	41. 5							
21. 38	42. 30							
21. 44	42. 30							
22. 1	44. 35							
22. 10	44. 10							
22. 44	49. 10							
22. 53	48. 15							
23. 6	49. 15							
23. 27	46. 50							
23. 37	46. 50							
23. 46	45. 50							
23. 59	46. 30							
Nov. 21		Nov. 21		Nov. 21		Nov. 21		
0. 0	20. 46. 30	0. 0	·1113	0. 0	·03870	1. 0	54 ·8	55 ·6
0. 58	45. 0	0. 2	·1112	2. 58	·03500	3. 0	56 ·2	57 ·0
1. 24	44. 45	0. 35	·1116	4. 30	·03312	Max.	57 ·0	57 ·4
2. 11	45. 30	0. 47	·1116	5. 52	·03224	9. 0	55 ·8	57 ·0
2. 18	44. 50	0. 57	·1114	6. 8	·03235	Min.	48 ·0	47 ·2
2. 43	45. 30	2. 12	·1119	6. 29	{·03225	22. 35	49 ·0	49 ·0
3. 1	43. 55	2. 58	·1117		{·03418			
3. 25	43. 35	4. 0	·1119	7. 52	·03362			
3. 29	44. 5	4. 59	·1117	8. 0	·03379			
4. 3	43. 0	5. 18	·1119	8. 24	·03345			
4. 47	44. 0	5. 31	·1117	11. 46	·03498			
5. 12	43. 10	6. 8	·1118	13. 50	·03645			
5. 28	43. 50	6. 31	·1105	16. 50	·03955			
5. 42	43. 10	6. 51	·1112	20. 42	·04049			
6. 7	44. 0	6. 59	·1112	23. 22	·04090			
6. 13	43. 10	7. 10	·1115		(†)			
6. 18	43. 45	7. 28	·1112					
6. 34	40. 5	7. 42	·1115					
6. 45	39. 50	7. 55	·1143					
7. 1	40. 30	8. 31	·1112					
7. 6	40. 0	8. 40	·1114					
7. 14	41. 20	9. 4	·1109					
7. 35	39. 55	9. 16	·1110					
7. 42	38. 15	9. 30	·1113					
7. 53	34. 25	9. 44	·1110					
7. 59	35. 30	10. 10	·1113					
8. 10	33. 30	10. 27	·1111					
8. 26	32. 10	10. 35	·1106					
8. 32	30. 15	10. 58	·1112					
8. 47	33. 15	11. 9	·1116					
9. 0	33. 5	11. 56	·1113					
9. 25	36. 25	12. 21	·1119					
9. 43	36. 5	12. 32	·1116					
10. 18	38. 35	12. 41	·1117					
10. 33	36. 55	13. 0	·1111					
10. 56	38. 30	13. 23	·1117					
11. 3	37. 45	13. 46	·1115					
11. 15	38. 35	14. 46	·1114					
11. 42	35. 55	16. 12	·1120					
12. 30	38. 50	17. 48	·1123					
12. 55	36. 15	19. 44	·1126					
13. 27	40. 10	21. 5	·1125					
13. 50	37. 50	22. 37	·1122					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 21		Nov. 21						
h m	° ′ ″	h m		h m		h m	°	°
14. 45	20. 36. 30	23. 8	·1123					
15. 45	41. 55	23. 13	·1125					
16. 49	40. 35	23. 29	·1123					
17. 13	41. 20	23. 59	·1125					
17. 29	40. 50							
19. 11	40. 15							
20. 7	40. 10							
21. 20	40. 45							
21. 59	42. 0							
22. 18	43. 10							
23. 12	43. 50							
23. 59	45. 15							
Nov. 22		Nov. 22		Nov. 22		Nov. 22		
0. 0	20. 45. 15	0. 0	·1125		(†)	1. 0	50 ·0	50 ·8
0. 24	46. 5	0. 21	·1127	0. 54	·04105	Max.	51 ·9	52 ·7
0. 45	44. 50	0. 50	·1122	3. 9	·04018	9. 0	51 ·8	52 ·2
0. 55	46. 0	1. 55	·1120	6. 16	·03825	19. 0	50 ·8	51 ·5
1. 11	44. 35	2. 22	·1123	9. 30	·03732	Min.	49 ·5	49 ·2
1. 22	45. 30	2. 37	·1120	12. 31	·03719	21. 0	50 ·5	51 ·5
1. 52	43. 10	3. 0	·1120	21. 10	·03768			
2. 0	44. 0	3. 13	·1123	22. 33	·03793			
2. 7	43. 25	3. 40	·1122	23. 23	·03765			
2. 15	43. 50	4. 13	·1112		(†)			
2. 23	42. 45	4. 32	·1117					
2. 51	41. 25	4. 53	·1118					
3. 37	45. 10	5. 1	·1115					
3. 42	44. 35	5. 17	·1119					
3. 48	45. 10	5. 55	·1118					
4. 8	43. 50	6. 8	·1128					
4. 15	44. 10	6. 20	·1120					
4. 36	42. 40	6. 34	·1122					
4. 46	44. 10	6. 56	·1119					
5. 5	42. 5	7. 11	·1112					
5. 11	42. 55	7. 23	·1116					
5. 20	42. 40	7. 38	·1113					
5. 28	44. 20	8. 8	·1117					
5. 40	41. 15	8. 17	·1132					
5. 53	36. 0	8. 29	·1126					
6. 2	38. 35	8. 40	·1124					
6. 10	39. 5	8. 59	·1129					
6. 22	40. 15	10. 1	·1123					
6. 44	40. 30	10. 12	·1125					
6. 59	42. 30	10. 37	·1123					
7. 11	39. 55	10. 46	·1125					
7. 28	40. 5	10. 57	·1124					
7. 41	38. 20	11. 38	·1127					
7. 50	37. 40	11. 59	·1124					
8. 0	38. 15	12. 45	·1123					
8. 10	35. 10	12. 59	·1125					
8. 18	39. 25	13. 17	·1124					
8. 45	39. 50	14. 29	·1124					
9. 4	37. 35	14. 55	·1130					
9. 30	39. 30	15. 14	·1126					
10. 2	40. 10	15. 25	·1128					
10. 12	41. 0	15. 46	·1124					
11. 8	40. 35	16. 4	·1130					
11. 35	40. 55	16. 12	·1130					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 22		Nov. 22						
h m s	° ′ ″	h m		h m		h m	°	°
11. 39	20. 41. 15	16. 23	·1135					
12. 28	39. 30	16. 31	·1133					
12. 56	41. 5	17. 8	·1133					
13. 20	40. 0	17. 16	·1130					
14. 7	41. 10	17. 38	·1129					
14. 43	41. 5	19. 32	·1128					
14. 47	42. 40	20. 45	·1122					
15. 1	42. 40	21. 9	·1123					
15. 18	40. 35	21. 23	·1129					
15. 26	40. 20	21. 35	·1124					
15. 29	41. 30	22. 30	·1122					
16. 0	40. 45	22. 58	·1122					
16. 15	42. 10		(†)					
16. 26	40. 55							
16. 36	41. 5							
16. 55	39. 35							
17. 36	40. 5							
18. 12	41. 30							
21. 7	41. 10							
22. 16	43. 5							
23. 8	45. 30							
23. 59	45. 15							
Nov. 23		Nov. 23		Nov. 23		Nov. 23		
0. 0	20. 45. 15		(†)		(†)	1. 0	53 ·6	54 ·8
0. 27	44. 10	0. 29	·1125	0. 30	·03705	3. 0	55 ·8	56 ·8
2. 21	43. 5	1. 13	·1126	2. 46	·03324	Max.	57 ·0	57 ·5
2. 38	42. 15	2. 23	·1124	4. 43	·03220	9. 0	56 ·0	57 ·3
3. 55	42. 10	2. 43	·1123	5. 39	·03210	18. 0	54 ·3	55 ·1
4. 48	41. 15	3. 56	·1123		·03405	Min.	53 ·2	53 ·1
7. 38	39. 40	4. 19	·1124	7. 46	·03317	21. 5	54 ·0	55 ·0
8. 43	40. 10	4. 30	·1126	10. 12	·03298			
9. 4	41. 15	4. 44	·1125	10. 46	·03320			
9. 45	40. 30	6. 27	·1124	11. 20	·03310			
10. 0	38. 0		***	11. 57	·03318			
10. 8	32. 25	7. 27	·1124	12. 42	·03295			
10. 30	25. 25	8. 1	·1126	15. 28	·03325			
10. 48	33. 45	8. 30	·1123	19. 40	·03444			
11. 1	34. 55	8. 43	·1126	21. 59	·03475			
11. 13	32. 30	9. 13	·1121	23. 59	·03422			
11. 24	34. 55	9. 31	·1119					
11. 42	34. 0	9. 40	·1120					
11. 47	34. 55	10. 0	·1115					
12. 4	35. 15	10. 7	·1119					
12. 36	33. 0	10. 13	·1118					
12. 49	30. 10	10. 25	·1129					
12. 57	30. 50	10. 32	·1128					
13. 7	30. 40	10. 41	·1129					
13. 30	33. 50	11. 8	·1117					
13. 56	33. 35	11. 15	·1119					
14. 4	32. 55	11. 31	·1114					
14. 18	33. 10	11. 56	·1129					
14. 28	36. 5	12. 38	·1117					
14. 35	36. 30	12. 55	·1120					
14. 47	41. 0	13. 17	·1114					
15. 4	40. 10	13. 44	·1117					
15. 31	31. 40	14. 29	·1104					
16. 2	34. 35	14. 37	·1105					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 23		Nov. 23						
h m s	° ′ ″	h m		h m		h m	°	°
16. 30	20. 33. 55	14. 53	·1104					
16. 48	36. 35	15. 25	·1126					
17. 57	40. 5	15. 41	·1126					
18. 45	41. 20	15. 55	·1128					
20. 0	40. 25	16. 15	·1122					
20. 9	41. 10	16. 34	·1119					
20. 17	39. 30	18. 12	·1112					
20. 23	40. 55	18. 42	·1114					
20. 32	40. 5	18. 52	·1113					
20. 38	41. 20	19. 58	·1112					
20. 46	40. 0	20. 8	·1115					
21. 0	41. 20	20. 15	·1112					
21. 23	41. 15	20. 24	·1116					
21. 33	42. 25	20. 33	·1114					
22. 12	42. 35	20. 39	·1117					
22. 37	42. 55	20. 45	·1113					
22. 48	43. 30	20. 57	·1117					
23. 0	45. 10	21. 1	·1116					
23. 36	46. 5	22. 25	·1117					
23. 59	45. 35	22. 47	·1115					
		22. 59	·1118					
		23. 11	·1117					
		23. 51	·1115					
		23. 59	·1114					
Nov. 24		Nov. 24		Nov. 24		Nov. 24		
0. 0	20. 45. 35	0. 0	·1114	0. 0	·03422	1. 0	56 ·4	57 ·9
0. 12	45. 10	0. 23	·1110	3. 23	·03176	3. 0	57 ·5	58 ·0
0. 49	46. 30	0. 32	·1113	4. 57	·03140	Max.	58 ·6	59 ·0
1. 6	45. 20	1. 7	·1111	6. 15	·03124	9. 0	58 ·1	59 ·0
1. 45	45. 55	1. 32	·1112	7. 26	·03120	18. 0	57 ·1	58 ·6
2. 12	44. 5	2. 16	·1110	8. 32	·03135	Min.	55 ·4	55 ·3
2. 30	44. 5	2. 57	·1113		·03397	21. 0	56 ·8	58 ·0
3. 3	45. 40	3. 14	·1113	11. 27	·03360	22. 0	57 ·2	58 ·0
3. 22	44. 55	3. 30	·1108	11. 45	·03335	23. 0	57 ·2	58 ·0
3. 30	45. 10	4. 11	·1112	18. 41	·03360			
3. 59	44. 5	4. 50	·1108	22. 33	·03447			
4. 46	40. 30	5. 14	·1111	23. 59	·03418			
5. 55	42. 35	6. 6	·1114					
6. 9	43. 0	6. 30	·1114					
6. 43	41. 30	6. 58	·1116					
7. 8	42. 0	7. 35	·1112					
7. 54	39. 30	7. 49	·1115					
8. 0	39. 50	8. 15	·1107					
8. 13	37. 55	8. 26	·1112					
8. 22	33. 30	8. 44	·1110					
8. 34	36. 5	8. 59	·1110					
9. 0	38. 30	9. 8	·1106					
9. 20	36. 45	9. 39	·1111					
10. 18	39. 30	10. 40	·1115					
10. 38	39. 30	10. 54	·1111					
10. 52	40. 45	11. 13	·1115					
11. 2	39. 50	11. 18	·1113					
11. 16	40. 25	11. 32	·1136					
11. 21	41. 35	11. 55	·1116					
11. 31	40. 0	12. 14	·1116					
11. 44	43. 40	12. 30	·1112					
12. 11	38. 55	13. 0	·1112					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 24		Nov. 24						
h m	° ′ ″	h m		h m		h m	°	°
12. 30	20. 40. 15	13. 22	·1115					
13. 12	41. 5	14. 57	·1113					
14. 16	41. 20	17. 58	·1117					
15. 30	42. 15	18. 12	·1116					
15. 47	43. 0	19. 1	·1117					
16. 1	42. 20	19. 11	·1115					
16. 53	42. 5	19. 30	·1117					
17. 8	42. 15	20. 31	·1110					
17. 45	41. 0	20. 45	·1111					
18. 0	42. 5	21. 11	·1110					
18. 16	41. 30	21. 24	·1111					
19. 4	42. 5	21. 46	·1109					
19. 18	41. 10	22. 48	·1110					
20. 13	42. 25	23. 8	·1113					
20. 32	41. 30	23. 37	·1113					
21. 7	42. 0		(†)					
21. 26	43. 40							
21. 37	43. 20							
	***							
22. 26	44. 10							
22. 47	46. 25							
22. 57	46. 10							
23. 13	48. 30							
23. 59	45. 35							
Nov. 25		Nov. 25		Nov. 25		Nov. 25		
0. 0	20. 45. 35		(†)	0. 0	·03418	0. 0	57 ·6	58 ·6
0. 23	48. 35	0. 4	·1111	1. 24	·03375	1. 0	58 ·0	59 ·0
0. 47	47. 0	0. 33	·1115	1. 58	·03368	2. 0	58 ·4	59 ·5
1. 38	44. 50	1. 9	·1103	2. 48	·03320	3. 0	58 ·9	59 ·9
2. 12	49. 0	1. 29	·1102	4. 57	·03255	6. 0	59 ·2	60 ·0
2. 29	49. 5	2. 36	·1107	5. 10	·03259	Max.	59 ·2	60 ·0
2. 38	48. 10	2. 48	·1099	5. 38	·03205	9. 0	57 ·9	58 ·8
3. 5	46. 15	3. 8	·1100	6. 33	·03193	12. 0	56 ·8	57 ·7
3. 12	44. 55	3. 19	·1098	7. 30	·03205	18. 0	54 ·4	55 ·7
3. 19	46. 0	3. 30	·1103	9. 0	·03260	Min.	53 ·0	52 ·7
3. 26	48. 20	3. 42	·1091	9. 38	·03300	21. 6	54 ·0	55 ·0
3. 39	42. 10	3. 50	·1096	13. 7	·03415	22. 0	54 ·0	55 ·2
3. 52	42. 0	4. 8	·1096	13. 42	·03420	23. 0	54 ·6	56 ·0
4. 1	40. 30	4. 15	·1100	14. 53	·03474			
4. 14	43. 25	4. 36	·1089	15. 24	·03478			
4. 32	40. 35	4. 46	·1098	21. 17:	·03806			
4. 45	45. 25	5. 6	·1080	23. 59	·03783			
4. 49	45. 0	5. 15	·1118					
5. 2	29. 5	5. 38	·1091					
5. 24	46. 10	5. 54	·1100					
5. 36	42. 25	6. 7	·1099					
5. 57	44. 5	6. 27	·1103					
6. 9	43. 10	7. 13	·1101					
6. 46	42. 25	7. 25	·1095					
7. 13	43. 15	7. 40	·1096					
7. 24	40. 55	7. 52	·1101					
7. 32	40. 55	7. 59	·1100					
7. 42	40. 10	8. 15	·1103					
8. 6	42. 30	8. 28	·1098					
8. 22	41. 10	8. 38	·1105					
8. 30	39. 25	9. 0	·1088					
8. 40	42. 0	9. 23	·1090					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 25		Nov. 25						
h m	° ′ ″	h m		h m		h m	°	°
9. 3	20. 34. 10	9. 37	·1097					
9. 12	43. 35	9. 58	·1085					
9. 18	32. 30	10. 12	·1094					
9. 29	32. 55	10. 23	·1096					
9. 38	36. 35	10. 40	·1090					
9. 54	38. 50	10. 57	·1093					
10. 12	34. 5	11. 15	·1093					
10. 17	36. 0	11. 48	·1110					
10. 26	35. 20	12. 10	·1101					
10. 36	37. 35	12. 22	·1100					
10. 53	36. 40	12. 30	·1097					
11. 12	39. 15	12. 54	·1101					
11. 30	39. 5	13. 23	·1110					
12. 8	42. 5	14. 19	·1107					
12. 27	40. 10	14. 32	·1108					
12. 36	41. 5	14. 53	·1118					
12. 53	40. 50	15. 18	·1119					
13. 1	43. 15	16. 43	·1111					
13. 8	43. 45	17. 11	·1110					
13. 47	35. 30	17. 30	·1107					
14. 15	36. 5	18. 16	·1107					
14. 53	42. 5	18. 45	·1111					
15. 7	42. 20	18. 58	·1109					
15. 28	40. 5	20. 8	·1111					
15. 44	40. 5	20. 23	·1110					
16. 2	38. 30	20. 53	·1111					
16. 15	38. 10	22. 2	·1106					
16. 32	41. 50	23. 0	·1106					
17. 23	40. 25		(†)					
18. 2	42. 0							
18. 39	41. 30							
19. 0	42. 0							
19. 42	40. 35							
20. 18	41. 5							
20. 30	40. 35							
20. 43	42. 15							
22. 6	43. 5							
22. 35	44. 40							
22. 45	44. 25							
23. 59	45. 40							
Nov. 26		Nov. 26		Nov. 26		Nov. 26		
0. 0	20. 45. 40		(†)	0. 0	·03783	0. 0	55 ·0	56 ·3
1. 0	46. 55	0. 45	·1112	5. 11	·03550	1. 0	55 ·7	57 ·0
2. 9	45. 5	1. 53	·1113	8. 0	·03503	2. 0	56 ·0	57 ·0
3. 11	44. 20	2. 9	·1115	12. 29	·03537	3. 0	56 ·0	57 ·5
3. 45	43. 5	3. 1	·1114	22. 21	·03784	Max.	56 ·3	57 ·5
4. 30	42. 30	3. 8	·1110	23. 49	·03790	9. 0	56 ·0	57 ·0
6. 43	41. 35	4. 23	·1109		(†)	18. 15	54 ·0	55 ·0
8. 16	41. 40	6. 43	·1108			Min.	52 ·8	52 ·6
8. 58	35. 35	7. 19	·1110			21. 0	53 ·7	54 ·7
9. 0	38. 5	8. 13	·1108					
9. 16	38. 40	8. 40	·1105					
9. 30	40. 0	9. 0	·1109					
9. 50	39. 30	9. 13	·1106					
10. 15	39. 50	9. 26	·1109					
10. 27	40. 55	10. 17	·1105					
10. 57	41. 25	11. 11	·1105					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov.26		Nov.26						
h m	° ′ ″	h m		h m		h m	°	°
11. 12	20. 42. 30	11. 23	·1107					
11. 54	42. 0	11. 57	·1107					
12. 12	42. 45	12. 10	·1110					
12. 40	41. 35	12. 42	·1106					
13. 36	41. 45	13. 20	·1107					
14. 49	42. 25	13. 42	·1109					
15. 17	42. 55	15. 0	·1107					
15. 43	42. 30	15. 21	·1109					
15. 58	44. 20	16. 6	·1110					
16. 29	42. 15	16. 52	·1114					
17. 0	41. 30	17. 37	·1113					
17. 52	42. 30	20. 30	·1113					
18. 19	41. 30	20. 52	·1111					
18. 55	42. 10	21. 22	·1109					
19. 4	41. 45	21. 47	·1112					
19. 15	42. 40		(†)					
20. 27	42. 20							
20. 35	41. 35							
20. 54	42. 40							
21. 26	42. 5							
22. 8	43. 55							
22. 23	43. 25							
23. 59	45. 5							
Nov.27		Nov.27		Nov.27		Nov.27		
0. 0	20. 45. 5	0. 0	·1115		(†)	1. 0	54 ·1	55 ·3
0. 38	46. 25	1. 40	·1118	0. 11	·03778	3. 0	55 ·0	56 ·0
1. 0	45. 5	2. 1	·1120	3. 13	·03715	Max.	55 ·0	56 ·0
1. 58	45. 0	2. 21	·1118	7. 34:	·03582	9. 0	54 ·2	55 ·4
4. 22	42. 30	2. 51	·1117	12. 8	·03716	18. 0	51 ·8	53 ·0
5. 25	41. 55	3. 8	·1119	16. 28	·03925	Min.	50 ·0	49 ·5
6. 26	41. 55	3. 50	·1117	21. 8	·03960	21. 0	51 ·0	52 ·0
7. 0	42. 15	4. 8	·1118		·03891			
8. 27	41. 10	4. 32	·1118	22. 32	·03932			
8. 57	41. 55	6. 44	·1119	23. 59	·03918			
9. 28	41. 10	7. 7	·1118					
16. 46	42. 55	8. 18	·1117					
18. 9	42. 15	10. 41	·1121					
18. 39	42. 55	13. 4	·1122					
19. 0	42. 20	16. 38	·1127					
20. 0	42. 50	17. 49	·1126					
20. 46	42. 35	18. 1	·1124					
23. 37	44. 50	18. 23	·1126					
	(†)	18. 36	·1126					
		18. 48	·1127					
		19. 12	·1126					
		20. 15	·1128					
		21. 2	·1127					
		21. 59	·1130					
		22. 25	·1128					
		22. 32	·1131					
		22. 59	·1127					
		23. 30	·1124					
			(†)					
Nov.28		Nov.28		Nov.28		Nov.28		
	(†)		(†)	0. 0	·03918	1. 0	52 ·0	53 ·5
0. 15	20. 44. 10	1. 0	·1122	3. 12	·03820	3. 0	53 ·0	54 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov.28		Nov.28		Nov.28		Nov.28		
h m	° ′ ″	h m		h m		h m	°	°
3. 20	20. 42. 20	2. 44	·1120	7. 29:	·03579	Max.	54 ·2	55 ·0
4. 14	42. 35	3. 0	·1120	14. 2	·04060	9. 0	52 ·0	53 ·7
4. 45	42. 5	4. 6	·1118	20. 53	·04275	Min.	41 ·7	41 ·0
5. 47	42. 40	4. 43	·1118	23. 59	·04340	21. 14	43 ·2	45 ·0
7. 2	40. 25	5. 39	·1115					
7. 24	41. 10	8. 29	·1117					
7. 45	40. 10	8. 45	·1119					
7. 58	40. 45	10. 44	·1121					
8. 31	39. 30	11. 8	·1124					
8. 41	40. 5	12. 11	·1122					
11. 52	39. 55	12. 49	·1126					
17. 4	42. 0	14. 4	·1127					
21. 0	42. 50	15. 2	·1130					
23. 2	47. 50	16. 45	·1131					
23. 48	45. 30	17. 9	·1133					
23. 59	45. 10	17. 33	·1134					
		18. 28	·1132					
		20. 22	·1133					
		21. 5	·1128					
		21. 53	·1130					
		22. 19	·1131					
		23. 59	·1133					
Nov.29		Nov.29		Nov.29		Nov.29		
0. 0	20. 45. 10	0. 0	·1133	0. 0	·04340	1. 0	43 ·6	45 ·0
0. 31	44. 20	0. 58	·1134	2. 53:	·04266	Max.	46 ·0	47 ·0
0. 50	44. 35	1. 21	·1135	7. 20:	·04053	9. 0	45 ·7	46 ·8
1. 20	43. 35	1. 38	·1134	12. 0	·04073	18. 30	41 ·3	42 ·3
2. 28	43. 50	1. 56	·1135	12. 42	·04078	Min.	39 ·2	38 ·5
6. 9	41. 25	2. 29	·1133	13. 50	·04140	21. 5	40 ·0	41 ·2
6. 38	43. 5	3. 15	·1132	16. 45	·04333			
7. 38	41. 50	3. 30	·1133		(†)			
8. 47	42. 10	3. 39	·1131	21. 5	·04463*			
9. 50	39. 20	4. 53	·1134					
10. 26	40. 10	5. 9	·1132					
10. 32	39. 35	5. 17	·1134					
11. 8	39. 50	5. 42	·1130					
11. 16	39. 20	7. 12	·1127					
11. 28	39. 55	7. 28	·1128					
11. 42	38. 10	7. 41	·1126					
12. 2	43. 50	8. 21	·1129					
12. 19	45. 10	9. 8	·1130					
12. 30	44. 5	9. 19	·1127					
12. 44	39. 55	9. 39	·1127					
13. 1	37. 10	10. 15	·1132					
13. 13	37. 35	10. 25	·1130					
13. 22	36. 50	10. 38	·1132					
13. 36	37. 5	10. 47	·1129					
13. 57	35. 10	10. 58	·1130					
14. 22	38. 35	11. 30	·1124					
14. 47	39. 50	11. 51	·1128					
14. 53	40. 55	12. 17	·1123					
15. 2	39. 50	12. 48	·1135					
15. 15	40. 30	13. 15	·1130					
15. 23	39. 55	13. 30	·1129					
15. 30	41. 0	13. 38	·1130					
15. 44	41. 20	13. 53	·1125					
15. 59	40. 15	14. 38	·1131					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

November 29. The photographic spot of light for the Vertical Force Magnet was off the sheet in the direction of increasing force from $16^h.45^m$. till $1^h.26^m$. on November 30.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 29		Nov. 29						
h m	° ′ ″	h m		h m		h m	°	°
16. 22	20. 40. 0	14. 54	·1131					
16. 30	39. 35	15. 21	·1134					
17. 37	42. 50	15. 37	·1134					
18. 0	42. 10	15. 58	·1137					
18. 23	43. 55	16. 23	·1137					
18. 49	43. 5	16. 53	·1140					
19. 2	43. 30	17. 38	·1139					
19. 15	42. 50	17. 58	·1142					
19. 50	43. 5	18. 25	·1140					
20. 0	42. 30	19. 2	·1141					
20. 47	42. 10	20. 42	·1139					
21. 8	42. 30	20. 48	·1140					
21. 41	45. 15	21. 8	·1137					
22. 9	44. 55	22. 8	·1140					
22. 38	47. 0	22. 58	·1133					
22. 56	46. 10	23. 9	·1134					
23. 19	48. 10	23. 53	·1127					
23. 34	46. 5	23. 59	·1129					
23. 59	46. 30							
Nov. 30		Nov. 30		Nov. 30		Nov. 30		
0. 0	20. 46. 30	0. 0	·1129		(†)	1. 0	43 ·0	44 ·0
0. 37	48. 5	0. 24	·1132	1. 0	·04357*	3. 0	45 ·0	47 ·0
1. 2	46. 40	0. 36	·1129	1. 26	·04300	Max.	46 ·5	48 ·5
1. 25	45. 10	1. 2	·1123	3. 0	·04160	9. 0	45 ·5	46 ·5
1. 39	46. 15		(†)	4. 14	·03992	18. 0	41 ·2	42 ·4
1. 45	45. 40	2. 43	·1116	7. 3	·03758	Min.	40 ·2	39 ·6
2. 2	47. 25	2. 58	·1114	7. 30	·03758	21. 0	41 ·0	42 ·0
2. 22	47. 30	3. 13	·1115	8. 19	·03720			
2. 42	50. 10	3. 40	·1098	9. 51	·03710			
2. 53	49. 20	3. 47	·1101	11. 1	·03683			
3. 8	49. 40	4. 0	·1098	11. 21	·03697			
3. 14	48. 45	4. 18	·1102	11. 43	·03675			
3. 24	49. 5	4. 37	·1097	12. 0	·03696			
3. 34	48. 0	5. 1	·1112	12. 18	·03685			
3. 46	50. 15	5. 35	·1103	14. 40	·03890			
3. 53	49. 20	5. 51	·1098	15. 19	·03878			
4. 17	49. 20	6. 21	·1107	22. 8:	·04364			
4. 37	43. 0	6. 30	·1118	23. 59	·04256			
4. 52	41. 55	6. 48	·1107					
5. 5	43. 0	6. 56	·1107					
5. 11	41. 20	7. 16	·1088					
5. 22	40. 20	7. 36	·1098					
5. 24	41. 10	7. 44	·1101					
5. 33	41. 25	7. 55	·1109					
5. 42	40. 10	8. 6	·1106					
5. 57	42. 45	8. 28	·1106					
6. 3	41. 50	8. 37	·1105					
6. 12	41. 25	9. 29	·1108					
6. 18	39. 40	9. 53	·1118					
6. 34	43. 30	9. 59	·1117					
6. 45	40. 25	10. 25	·1128					
6. 57	38. 30	10. 30	·1127					
7. 19	29. 35	10. 53	·1130					
7. 38	36. 0	11. 8	·1127					
7. 54	39. 5	11. 31	·1144					
8. 2	37. 30	11. 46	·1130					
8. 16	37. 30	12. 8	·1148					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 30		Nov. 30						
h m	° ′ ″	h m		h m		h m	°	°
8. 28	20. 38. 20	12. 30	·1122					
8. 42	36. 15	12. 45	·1122					
8. 52	37. 25	12. 56	·1114					
9. 2	35. 45	13. 2	·1118					
9. 24	35. 25	13. 10	·1116					
9. 45	38. 5	13. 17	·1122					
9. 53	38. 0	13. 29	·1122					
10. 6	40. 35	13. 43	·1127					
10. 15	39. 30	14. 6	·1124					
10. 26	41. 10	14. 24	·1126					
10. 32	40. 5	14. 37	·1121					
10. 41	37. 55	15. 12	·1135					
11. 7	34. 15	15. 21	·1129					
11. 22	35. 30	15. 31	·1129					
11. 30	35. 0	15. 42	·1132					
11. 38	32. 40	16. 9	·1128					
11. 46	32. 15	17. 14	·1129					
11. 54	36. 45	17. 32	·1136					
12. 7	41. 20	17. 44	·1132					
12. 24	37. 45	17. 50	·1133					
12. 45	37. 5	18. 13	·1127					
12. 57	35. 45	18. 38	·1131					
13. 6	37. 20	19. 15	·1124					
13. 24	34. 45	19. 24	·1127					
13. 58	37. 55	20. 0	·1128					
14. 11	36. 5	20. 36	·1104					
14. 16	38. 0	20. 42	·1106					
14. 23	37. 50	20. 50	·1104					
14. 46	55. 35	21. 29	·1121					
15. 25	39. 15	22. 2	·1127					
15. 34	39. 30	22. 45	·1126					
15. 49	42. 10	22. 48	·1127					
16. 1	41. 40	23. 36	·1107					
16. 14	42. 0	23. 43	·1111					
16. 32	44. 5	23. 49	·1105					
16. 37	43. 40	23. 55	·1108					
16. 57	47. 15	23. 59	·1105					
17. 3	46. 20							
17. 27	48. 25							
17. 34	48. 0							
17. 49	44. 5							
18. 0	44. 10							
18. 10	46. 5							
18. 13	45. 20							
18. 30	46. 35							
18. 52	46. 55							
18. 56	47. 30							
19. 17	46. 25							
19. 27	47. 15							
19. 38	46. 5							
19. 52	45. 5							
20. 4	47. 5							
20. 40	45. 30							
20. 45	46. 0							
20. 56	44. 10							
21. 15	47. 5							
21. 23	46. 0							
21. 51	44. 35							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 30								
h m	° ′ ″	h m		h m		h m	°	°
22. 32	20. 44. 30							
22. 49	46. 25							
23. 0	45. 40							
23. 7	47. 0							
23. 18	45. 55							
23. 26	46. 35							
23. 37	45. 15							
23. 42	46. 5							
23. 48	44. 25							
23. 59	44. 10							
Dec. 1		Dec. 1		Dec. 1		Dec. 1		
0. 0	20. 44. 10	0. 0	·1105	0. 0	·04256	Min.	43 ·0	44 ·0
0. 8	43. 30	0. 15	·1117	2. 55	·03962	1. 0	44 ·0	45 ·0
0. 12	45. 5	0. 38	·1117	5. 50	·03566	3. 0	46 ·0	47 ·0
0. 26	43. 0	0. 47	·1120	11. 1	·03455	Max.	49 ·6	50 ·0
0. 32	44. 50	1. 21	·1110	11. 33	·03460	9. 0	49 ·0	50 ·0
0. 40	44. 0	1. 40	·1111	12. 16	·03395	18. 15	50 ·7	51 ·6
1. 0	47. 50	2. 10	·1114	13. 8	·03404	Min.	49 ·7	49 ·7
1. 14	46. 15	2. 30	·1106	14. 40	·03370	21. 0	50 ·2	51 ·4
1. 22	47. 0	2. 44	·1114	15. 7	·03340	22. 0	51 ·0	52 ·0
2. 1	43. 30	3. 30	·1100	19. 54	·03391	23. 0	51 ·0	52 ·0
2. 11	44. 10	3. 46	·1108	23. 59	·03372	Max.	51 ·6	52 ·5
2. 37	37. 30	4. 26	·1117					
2. 45	38. 25	4. 40	·1112					
2. 58	37. 35	5. 24	·1120					
3. 2	38. 40	5. 55	·1118					
3. 11	37. 25	6. 17	·1118					
3. 18	37. 10	6. 41	·1114					
3. 30	35. 15	6. 54	·1115					
3. 43	38. 5	7. 13	·1104					
3. 51	37. 55	7. 38	·1113					
4. 11	41. 30	7. 55	·1111					
4. 17	41. 20	8. 2	·1112					
4. 31	43. 30	8. 25	·1101					
4. 51	44. 5	8. 41	·1115					
5. 10	43. 5	8. 55	·1120					
5. 46	42. 35	9. 6	·1113					
6. 2	42. 55	9. 19	·1109					
6. 29	42. 5	9. 28	·1113					
6. 41	43. 10	9. 41	·1105					
6. 49	42. 10	9. 55	·1098					
6. 56	42. 0	10. 5	·1104					
7. 3	40. 15	10. 10	·1103					
7. 17	40. 5	10. 39	·1121					
7. 26	41. 0	11. 9	·1109					
7. 37	39. 5	11. 20	·1098					
8. 0	30. 25	11. 33	·1103					
8. 17	34. 0	11. 43	·1118					
8. 30	31. 25	11. 50	·1111					
9. 0	35. 55	12. 0	·1114					
9. 8	32. 50	12. 14	·1123					
9. 20	36. 5	12. 37	·1109					
9. 36	36. 30	12. 43	·1114					
9. 45	36. 0	12. 59	·1107					
10. 8	36. 45	13. 10	·1111					
10. 23	35. 30	13. 25	·1108					
10. 45	39. 0	14. 0	·1112					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 1		Dec. 1						
h m	° ′ ″	h m		h m		h m	°	°
10. 57	20. 38. 30	14. 18	·1104					
11. 27	35. 5	14. 32	·1103					
11. 52	51. 0	14. 52	·1116					
12. 13	41. 35	15. 10	·1114					
12. 26	43. 55	15. 22	·1119					
12. 34	42. 10	15. 36	·1122					
12. 38	40. 30	15. 44	·1121					
13. 3	40. 25	15. 48	·1112					
13. 21	45. 5	15. 56	·1116					
13. 43	42. 15	16. 30	·1110					
13. 52	42. 45	16. 58	·1121					
14. 2	42. 0	17. 13	·1117					
14. 21	45. 15	17. 42	·1115					
14. 30	47. 45	17. 53	·1116					
14. 47	48. 25	17. 59	·1111					
15. 0	47. 15	18. 5	·1114					
15. 26	41. 50		* * *					
15. 44	40. 25	18. 42	·1115					
15. 48	41. 30	18. 55	·1111					
15. 53	38. 30	19. 0	·1115					
16. 0	39. 30	19. 7	·1112					
	(†)	19. 15	·1114					
18. 28	43. 0	19. 31	·1112					
18. 42	43. 15	19. 39	·1115					
18. 45	43. 45	19. 43	·1110					
18. 54	43. 10	19. 47	·1114					
18. 57	42. 5	19. 54	·1115					
19. 1	43. 10	20. 0	·1107					
19. 17	43. 15	20. 8	·1116					
19. 33	42. 30	20. 28	·1116					
19. 41	43. 30	20. 40	·1110					
19. 45	42. 30	20. 48	·1116					
19. 57	44. 0	21. 51	·1107					
20. 0	41. 50	22. 14	·1111					
20. 8	43. 30	22. 25	·1105					
20. 29	44. 0	22. 37	·1108					
20. 34	42. 35	22. 59	·1100					
21. 2	45. 10	23. 15	·1108					
21. 35	44. 25	23. 24	·1101					
21. 53	45. 0	23. 38	·1097					
22. 2	46. 20		(†)					
22. 21	45. 55							
22. 33	48. 25							
22. 52	48. 5							
22. 57	46. 35							
23. 14	51. 0							
23. 21	49. 5							
23. 24	49. 35							
23. 34	47. 35							
23. 59	49. 30							
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
0. 0	20. 49. 30		(†)	0. 0	·03372	0. 0	51 ·6	52 ·5
0. 34	42. 55	0. 9	·1091	0. 27	·03363	1. 0	52 ·3	53 ·4
0. 43	43. 15	0. 23	·1082	1. 8	·03370	2. 0	53 ·0	54 ·2
0. 53	41. 40	0. 37	·1084	2. 15	·03336	3. 0	53 ·3	54 ·6
0. 57	42. 15	1. 8	·1106	2. 49	·03335	Max.	53 ·9	54 ·6
1. 0	41. 25	1. 27	·1108	3. 13	·03324	6. 0	53 ·0	53 ·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
h m	° ′ ″	h m		h m		h m	°	°
1. 38	20. 46. 5	1. 45	·1104	4. 8	·03318	9. 0	51 ·2	53 ·0
1. 48	45. 10	1. 54	·1106	5. 47	·03340	12. 0	49 ·5	50 ·6
1. 58	45. 25	2. 5	·1106	6. 22	·03310	Min.	47 ·0	46 ·0
2. 18	42. 10	2. 25	·1086	6. 53	·03317	19. 0	48 ·0	49 ·0
2. 36	35. 55	2. 45	·1105	7. 8	·03300	21. 0	49 ·0	50 ·0
2. 47	42. 0	3. 23	·1093	7. 56	·03300	22. 0	49 ·2	50 ·5
3. 0	41. 0	3. 33	·1096	10. 18	·03453	23. 0	49 ·7	51 ·0
3. 3	41. 50	3. 48	·1089	11. 42	·03473			
3. 32	37. 55	3. 55	·1092	16. 15	·03878			
3. 57	40. 45	4. 9	·1076	19. 39:	·04044			
4. 8	38. 35	4. 13	·1078	23. 59	·03804			
4. 12	39. 5	4. 20	·1076					
4. 22	37. 0	4. 38	·1093					
4. 33	39. 45	4. 44	·1082					
4. 42	37. 5	4. 53	·1087					
4. 59	44. 0	5. 9	·1078					
5. 7	42. 55	5. 19	·1083					
5. 15	43. 45	5. 23	·1080					
5. 18	40. 20	5. 28	·1085					
5. 26	38. 55	5. 39	·1072					
5. 38	25. 30	5. 48	·1114					
5. 47	40. 10	5. 56	·1106					
5. 55	39. 30	6. 13	·1101					
6. 3	42. 15	6. 17	·1103					
6. 9	41. 20	6. 27	·1097					
6. 13	42. 30	6. 34	·1099					
6. 42	26. 15	6. 45	·1121					
6. 47	30. 20	6. 55	·1118					
6. 53	30. 15	7. 0	·1126					
7. 4	38. 50	7. 12	·1113					
7. 13	38. 5	7. 22	·1116					
7. 30	42. 5	8. 2	·1097					
7. 37	41. 25	8. 16	·1118					
7. 41	42. 15	8. 19	·1117					
7. 45	41. 10	8. 28	·1110					
7. 52	40. 15	8. 45	·1094					
8. 7	33. 55	9. 3	·1106					
8. 15	38. 10	9. 10	·1107					
8. 21	37. 45	9. 28	·1099					
8. 37	42. 55	9. 38	·1102					
8. 57	36. 50	9. 49	·1099					
9. 11	38. 35	10. 18	·1105					
9. 32	36. 30	10. 39	·1117					
9. 43	37. 30	10. 57	·1113					
9. 50	37. 5	11. 4	·1113					
9. 58	37. 25	11. 13	·1106					
10. 29	41. 45	11. 31	·1114					
10. 59	38. 10	11. 50	·1108					
11. 7	41. 0	12. 0	·1113					
11. 14	40. 15	12. 14	·1113					
11. 18	43. 0	12. 34	·1120					
11. 26	43. 15	12. 51	·1108					
11. 30	45. 20	13. 6	·1111					
11. 53	39. 35	13. 25	·1106					
12. 2	43. 30	13. 37	·1110					
12. 30	41. 0	13. 47	·1107					
12. 43	38. 50	14. 0	·1109					
12. 47	39. 0	14. 16	·1107					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 2		Dec. 2						
h m	° ′ ″	h m		h m		h m	°	°
12. 59	20. 37. 55	14. 33	·1112					
13. 14	39. 55	14. 55	·1112					
13. 22	39. 25	15. 15	·1108					
13. 34	42. 40	15. 30	·1111					
13. 53	43. 45	15. 42	·1111					
14. 0	45. 0	15. 52	·1107					
14. 16	44. 30	16. 14	·1113					
14. 27	44. 35	16. 23	·1109					
14. 45	41. 25	16. 31	·1109					
15. 0	44. 30	17. 0	·1117					
15. 15	44. 15	17. 10	·1118					
15. 18	45. 20	17. 33	·1120					
15. 30	44. 30	17. 42	·1124					
15. 38	46. 0	18. 37	·1120					
15. 50	44. 20	18. 44	·1117					
16. 1	45. 35	18. 57	·1124					
16. 28	46. 0	18. 59	·1121					
17. 1	50. 45	19. 7	·1125					
17. 30	46. 0	19. 27	·1124					
17. 37	47. 0	19. 55	·1116					
18. 0	43. 35	20. 12	·1117					
18. 13	44. 30	20. 31	·1112					
18. 24	44. 0	20. 50	·1113					
18. 32	44. 45	21. 6	·1104					
18. 45	43. 20	21. 10	·1110					
18. 57	45. 10	21. 31	·1110					
19. 11	44. 25	21. 45	·1112					
19. 22	44. 40	21. 53	·1109					
19. 33	43. 35	22. 0	·1113					
	***	22. 20	·1108					
20. 3	44. 30	22. 31	·1104					
20. 13	43. 55	22. 52	·1105					
20. 38	43. 25	23. 24	·1104					
20. 55	44. 35	23. 59	·1108					
21. 0	42. 35							
21. 2	44. 5							
21. 26	44. 55							
21. 39	44. 5							
21. 55	44. 30							
22. 13	47. 30							
22. 18	45. 30							
23. 31	48. 25							
23. 52	46. 40							
23. 59	46. 35							
Dec. 3		Dec. 3		Dec. 3		Dec. 3		
0. 0	20. 46. 35	0. 0	·1108	0. 0	·03804	0. 0	50 ·2	51 ·2
0. 16	46. 55	0. 10	·1110	4. 23	·03504	1. 0	50 .8	52 ·0
0. 40	49. 5		(†)	5. 47	·03500	3. 0	51 ·7	52 ·8
	***	0. 50	·1116	7. 38	·03570	Max.	52 ·3	52 ·8
1. 0	48. 35	1. 0	·1114	9. 59	·03762	9. 0	48 ·5	49 ·5
1. 53	43. 55	1. 31	·1116	11. 4	·03818	18. 30	43 ·0	44 ·5
2. 37	42. 15	2. 8	·1106	11. 38	·03877	Min.	41 ·1	40 ·2
	***	2. 27	·1098	12. 6	·03885	21. 5	42 ·0	43 ·0
3. 33	42. 5	3. 0	·1112	12. 52	·03957			
3. 54	40. 50	3. 17	·1108	13. 31	·03980			
4. 16	32. 45	3. 38	·1110	16. 39	·04280			
4. 27	31. 55	3. 54	·1107	19. 43	·04333			
					(†)			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 3. The photographic trace of the Vertical Force Magnet was off the sheet in the direction of increasing force from $19^h.\ 43^m.$ until $2^h.\ 28^m.$ on December 4.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 3		Dec. 3		Dec. 3				
h m	° ′ ″	h m		h m		h m	°	°
4. 41	20. 39. 0	4. 10	·1093	21. 0	·04449*			
5. 0	43. 25	4. 14	·1096					
5. 10	42. 35	4. 24	·1089					
5. 24	35. 0	4. 53	·1111					
5. 41	35. 25	5. 9	·1110					
5. 48	33. 55	5. 26	·1101					
6. 7	37. 50	5. 36	·1102					
6. 34	40. 20	5. 46	·1097					
7. 15	39. 30	5. 55	·1097					
7. 38	33. 45	6. 8	·1106					
7. 53	35. 15	6. 28	·1114					
8. 8	39. 5	6. 43	·1112					
8. 27	34. 45	6. 54	·1114					
8. 42	37. 0	7. 9	·1106					
8. 51	36. 5	7. 33	·1103					
9. 2	37. 5	8. 1	·1116					
9. 16	34. 0	8. 25	·1105					
9. 34	39. 25	8. 34	·1105					
9. 45	38. 35	8. 40	·1108					
10. 11	41. 5	8. 58	·1096					
10. 46	40. 5	9. 16	·1100					
11. 0	41. 0	9. 32	·1115					
11. 13	40. 0	9. 46	·1104					
11. 28	42. 0	9. 57	·1111					
11. 43	45. 15	10. 18	·1112					
12. 36	39. 0	10. 29	·1119					
12. 52	42. 0	10. 43	·1117					
13. 38	38. 30	10. 56	·1123					
13. 44	38. 55	11. 9	·1117					
14. 0	36. 5	11. 25	·1117					
14. 28	40. 30	11. 42	·1125					
14. 37	39. 40	12. 6	·1117					
14. 47	39. 45	12. 17	·1114					
14. 58	41. 0	12. 30	·1115					
15. 18	39. 0	12. 49	·1127					
15. 31	40. 10	13. 8	·1129					
16. 1	41. 0	13. 23	·1128					
16. 17	43. 5	13. 40	·1116					
16. 38	43. 40	13. 50	·1115					
16. 49	45. 0	14. 8	·1121					
17. 27	42. 50	14. 40	·1111					
17. 53	46. 0	14. 53	·1113					
18. 15	45. 35	15. 13	·1114					
18. 23	46. 35	15. 28	·1111					
18. 30	46. 5	15. 42	·1113					
18. 42	48. 15	15. 58	·1118					
19. 3	49. 10	16. 13	·1119					
19. 56	44. 50	16. 23	·1117					
20. 6	45. 20	16. 34	·1117					
20. 39	44. 35	16. 43	·1121					
20. 46	46. 50	17. 0	·1116					
20. 59	47. 35	17. 11	·1116					
21. 6	49. 35	17. 26	·1124					
21. 24	49. 5	17. 40	·1118					
21. 31	50. 0	17. 56	·1113					
21. 41	49. 30	18. 18	·1116					
21. 52	50. 0	18. 26	·1115					
22. 1	48. 30	18. 38	·1122					
Dec. 3		Dec. 3						
h m	° ′ ″	h m		h m		h m	°	°
22. 8	20. 44. 25	18. 43	·1119					
22. 14	47. 25	19. 2	·1124					
22. 20	46. 30	19. 17	·1119					
22. 25	47. 35	20. 7	·1111					
22. 38	45. 10	20. 22	·1105					
22. 51	46. 25	20. 34	·1106					
23. 8	44. 40	20. 40	·1103					
23. 14	46. 5	20. 45	·1109					
23. 59	47. 15	20. 54	·1106					
		21. 6	·1107					
		21. 31	·1103					
		21. 45	·1106					
		22. 0	·1106					
		22. 8	·1099					
		22. 15	·1118					
		22. 22	·1114					
		22. 26	·1120					
		22. 36	·1111					
		22. 46	·1117 ***					
		23. 8	·1112					
		23. 12	·1120					
		23. 15	·1116 (†)					
Dec. 4		Dec. 4		Dec. 4		Dec. 4		
0. 0	20. 47. 15		(†)		(†)	1. 0	43·9	45·0
0. 16	47. 50	0. 15	·1115	1. 0	·04422*	3. 0	46·6	48·0
0. 30	47. 25	0. 29	·1106	2. 28	·04315	6. 0	48·3	49·0
0. 38	47. 55	0. 44	·1109	3. 13	·04166	Max.	50·0	50·4
1. 0	45. 0	1. 1	·1108	5. 27.	·03740	9. 0	48·1	49·0
1. 22	46. 5	1. 21	·1114	10. 21	·03513	Min.	47·6	47·4
2. 13	34. 10		(†)	12. 38	·03498	18. 0	48·2	49·2
2. 42	41. 55	1. 59	·1108	14. 14	·03470	21. 0	48·8	49·8
2. 46	41. 30	2. 17	·1105	16. 43	·03478			
2. 52	42. 55	2. 36	·1106	22. 13	·03430			
2. 59	42. 0	2. 45	·1107	23. 59	·03400			
3. 7	43. 50	3. 0	·1105					
3. 13	42. 55	3. 10	·1105					
3. 15	43. 25	3. 30	·1109					
3. 22	41. 30	3. 46	·1101					
3. 38	45. 0	4. 18	·1113					
4. 4	43. 30	4. 29	·1111					
4. 15	42. 30	5. 12	·1115					
4. 23	43. 15	5. 28	·1112					
5. 4	42. 45	5. 43	·1112					
5. 22	43. 30	5. 58	·1118					
5. 47	40. 5	6. 18	·1116					
6. 0	41. 25	6. 33	·1111					
6. 23	40. 0	6. 53	·1120					
6. 38	38. 5	7. 11	·1115					
7. 13	40. 55	7. 38	·1114					
7. 27	39. 55	7. 56	·1122					
7. 47	34. 10	8. 45	·1112					
8. 3	34. 10	9. 7	·1114					
8. 30	38. 5	9. 27	·1112					
8. 42	38. 55	9. 33	·1113					
9. 0	37. 25	10. 22	·1108					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Dec. 4		Dec. 4						
h m	° ′ ″	h m		h m		h m	°	°
9. 33	20. 39. 40	11. 9	·1116					
10. 8	40. 0	11. 16	·1113					
10. 19	41. 0	11. 43	·1112					
10. 31	39. 30	12. 2	·1117					
10. 44	40. 10	12. 28	·1116					
10. 58	39. 15	13. 3	·1122					
11. 12	41. 55	13. 13	·1119					
11. 45	41. 15	13. 34	·1126					
12. 6	42. 5	14. 38	·1114					
12. 35	42. 0	15. 4	·1117					
12. 43	43. 10	15. 13	·1116					
12. 50	45. 0	15. 24	·1119					
13. 1	44. 10	15. 31	·1117					
13. 15	41. 35	15. 41	·1120					
13. 27	41. 25	15. 49	·1119					
13. 54	45. 0	16. 3	·1118					
14. 14	42. 30	16. 24	·1122					
14. 37	42. 0	17. 0	·1116					
14. 55	42. 20	17. 10	·1121					
15. 3	40. 15	17. 37	·1117					
15. 16	41. 40	17. 45	·1120					
15. 44	40. 45	18. 47	·1120					
15. 51	41. 20	19. 14	·1119					
16. 3	40. 40	19. 29	·1119					
16. 13	41. 50	19. 55	·1107					
16. 33	41. 25	20. 15	·1105					
16. 52	42. 5	20. 51	·1116					
17. 1	43. 50	21. 6	·1116					
17. 23	43. 25	21. 24	·1114					
17. 30	42. 20	22. 24	·1107					
17. 43	43. 10	22. 38	·1112					
18. 13	42. 10	23. 0	·1127					
18. 48	43. 35	23. 19	·1116					
19. 10	42. 45	23. 40	·1111					
19. 31	43. 10	23. 59	·1110					
19. 39	44. 30							
20. 0	44. 40							
20. 13	46. 55							
20. 55	46. 55							
21. 6	46. 0							
21. 33	46. 40							
22. 3	44. 35							
22. 15	44. 40							
22. 25	43. 10							
	***							
22. 50	43. 40							
23. 25	47. 55							
23. 52	40. 10							
23. 59	45. 10							
Dec. 5		Dec. 5		Dec. 5		Dec. 5		
0. 0	20. 45. 10	0. 0	·1110	0. 0	·03400	1. 0	51 ·0	52 ·0
0. 13	45. 5	0. 7	·1110	3. 0	·03364	3. 0	52 ·2	53 ·4
0. 57	44. 15		(†)		·03425	Max.	53 ·1	54 ·0
1. 9	46. 10	1. 0	·1106*	3. 54	·03335	9. 0	53 ·0	54 ·0
1. 53	42. 5	1. 10	·1108		·03362	Min.	49 ·3	49 ·0
2. 8	41. 10	1. 43	·1104	5. 1	·03296	22. 0	51 ·0	52 ·5
2. 13	41. 50	2. 8	·1095	7. 8	·03257			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Dec. 5		Dec. 5		Dec. 5				
h m	° ′ ″	h m		h m		h m	°	°
2. 22	20. 39. 5	2. 36	·1102	8. 45	·03260			
2. 28	39. 40	3. 8	·1108		·03470			
2. 31	41. 45	3. 15	·1106	15. 0	·03310			
2. 39	41. 5	3. 37	·1108	17. 7	·03304			
3. 2:	43. 30	3. 53	·1106	18. 39	·03328			
3. 37	41. 55	4. 38	·1115	19. 23	·03367			
3. 55	38. 55	4. 57	·1112	20. 39	·03410			
4. 1	39. 20	6. 15	·1113	23. 59	·03611			
4. 11	38. 30	6. 49	·1111					
4. 32	40. 55	7. 3	·1105					
4. 38	40. 0	7. 27	·1108					
4. 58	39. 5	7. 32	·1107					
5. 12	41. 0	7. 54	·1112					
5. 15	40. 10	8. 35	·1111					
5. 46	41. 50	8. 43	·1108					
6. 23	41. 35	8. 53	·1109					
6. 38	41. 0	9. 8	·1107					
6. 46	41. 35	9. 30	·1117					
7. 2	38. 0	9. 40	·1117					
7. 23	40. 5	9. 51	·1120					
7. 47	38. 20	10. 37	·1105					
7. 54	39. 0	10. 45	·1105					
8. 0	38. 25	11. 7	·1101					
8. 11	38. 45	11. 23	·1104					
8. 38:	40. 50	11. 52	·1107					
9. 5	38. 35	12. 3	·1104					
9. 27	34. 0	12. 15	·1106					
9. 41	34. 5	12. 37	·1105					
10. 10	37. 30	13. 8	·1105					
10. 30	35. 35	13. 23	·1107					
10. 57	39. 45	13. 36	·1107					
11. 14	39. 55	13. 47	·1104					
11. 27	41. 45	14. 15	·1111					
11. 51	39. 15	14. 46	·1112					
12. 17	39. 50	15. 12	·1110					
12. 30	38. 50	15. 55	·1110					
13. 12	39. 30	16. 13	·1104					
13. 28	43. 0	16. 22	·1105					
13. 37	42. 25	16. 30	·1103					
13. 50	43. 55	17. 8	·1110					
14. 12	42. 5	17. 15	·1110					
14. 20	42. 30	18. 0	·1121					
14. 49	41. 10	18. 15	·1120					
14. 56	42. 0	18. 37	·1107					
15. 3	41. 25	18. 55	·1100					
15. 15	42. 45	19. 13	·1100					
15. 26	42. 5	19. 24	·1110					
15. 48	42. 0	19. 32	·1114					
16. 4	43. 10	21. 13	·1112					
16. 9	42. 25	21. 18	·1113					
16. 16	44. 15	21. 38	·1111					
16. 28	43. 10	22. 3	·1111					
16. 45	45. 5	22. 30	·1104					
16. 58	44. 40		(†)					
17. 9	43. 45	23. 0	·1102					
17. 16	45. 5	23. 38	·1110					
17. 27	45. 0	23. 59	·1113					
17. 54	47. 5							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 5								
h m	° ′ ″	h m		h m		h m	°	°
18. 5	20. 46. 30							
18. 15	47. 10							
18. 43	43. 40							
18. 53	43. 45							
19. 2	44. 45							
19. 10	44. 0							
19. 27	46. 5							
19. 33	45. 0							
19. 46	45. 40							
20. 16	43. 10							
20. 53	43. 5							
	***							
21. 33	44. 0							
21. 45	43. 5							
22. 27	47. 5							
23. 0	44. 50							
23. 32	45. 40							
23. 44	44. 50							
23. 59	44. 15							
Dec. 6		Dec. 6		Dec. 6		Dec. 6		
0. 0	20. 44. 15	0. 0	·1113	0. 0	·03611	0. 30	50 ·4	51 ·7
0. 8	44. 0	0. 20	·1116	1. 38:	·03678	Max.	50 ·5	51 ·9
0. 47	44. 5	0. 53	·1118	5. 6	·03668	8. 0	50 ·5	51 ·9
1. 2	43. 5	1. 22	·1115	6. 11	·03660	Min.	47 ·0	46 ·5
1. 14	43. 45	1. 43	·1116	7. 0	·03610	18. 0	48 ·0	49 ·0
1. 25	43. 0	2. 12	·1113	9. 8	·03679	21. 0	47 ·8	49 ·0
1. 28	43. 40	3. 8	·1112	9. 30	·03666			
1. 40	43. 5	3. 23	·1107	10. 55	·03742			
1. 52	44. 5	3. 37	·1106	11. 23	·03724			
2. 0	44. 0	3. 57	·1099	11. 47	·03769			
2. 15	42. 40	4. 15	·1097	17. 7	·04034			
3. 8	42. 25	4. 39	·1102	21. 47	·04070			
3. 17	42. 55	4. 56	·1096	23. 59	·03933			
3. 30	41. 20	5. 17	·1102					
3. 45	41. 20	5. 28	·1102					
3. 58	40. 5	5. 37	·1100					
4. 8	41. 0	5. 51	·1100					
4. 21	40. 35	6. 17	·1137					
4. 40	42. 5	6. 28	·1124					
4. 52	39. 20	6. 38	·1126					
5. 5	38. 30	6. 58	·1098					
5. 22	39. 40	7. 12	·1107					
5. 30	39. 15	7. 38	·1090					
5. 40	41. 0	7. 52	·1098					
5. 46	39. 55	8. 0	·1096					
5. 54	34. 30	8. 17	·1098					
5. 58	35. 10	8. 53	·1114					
6. 2	34. 5	9. 1	·1111					
6. 7	35. 10	9. 10	·1118					
6. 12	33. 5	9. 24	·1110					
6. 20	37. 15	9. 36	·1095					
6. 29	35. 0	9. 52	·1114					
6. 44	40. 10	10. 12	·1104					
6. 54	34. 40	10. 20	·1110					
7. 6	32. 30	10. 37	·1114					
7. 25	39. 20	10. 45	·1111					
7. 41	36. 50	11. 8	·1134					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 6		Dec. 6						
h m	° ′ ″	h m		h m		h m	°	°
8. 12	20. 41. 20	11. 39	·1107					
8. 25	39. 5	11. 48	·1116					
8. 30	39. 20	11. 59	·1119					
8. 45	37. 20	12. 22	·1107					
8. 52	38. 10	12. 42	·1111					
9. 0	38. 0	12. 51	·1110					
9. 28	48. 50	13. 13	·1114					
9. 46	38. 45	13. 31	·1114					
10. 5	38. 45	13. 45	·1111					
10. 17	34. 30	15. 7	·1116					
10. 28	35. 5	15. 20	·1114					
10. 56	40. 10	15. 41	·1119					
11. 22	47. 25	16. 4	·1120					
11. 34	45. 50	17. 8	·1115					
12. 0	35. 5	17. 40	·1121					
12. 21	40. 30	17. 49	·1120					
12. 44	38. 0	18. 2	·1121					
12. 58	40. 25	18. 18	·1119					
13. 13	39. 35	18. 37	·1119					
13. 29	41. 0	19. 10	·1112					
13. 39	39. 50	19. 28	·1113					
13. 46	40. 35	19. 47	·1111					
14. 9	40. 45	19. 57	·1112					
14. 20	42. 5	20. 7	·1109					
14. 37	41. 0	20. 46	·1120					
15. 9	39. 35	20. 56	·1114					
15. 27	40. 15	21. 2	·1117					
15. 35	41. 40	21. 55	·1112					
15. 52	40. 20	22. 19	·1108					
16. 13	40. 30	22. 35	·1110					
16. 33	42. 0	22. 55	·1108					
16. 54	42. 15	23. 9	·1108					
17. 12	44. 20	23. 47	·1097					
18. 27	40. 50		(†)					
18. 39	41. 20							
18. 55	44. 30							
19. 23	45. 30							
19. 32	45. 55							
19. 44	46. 25							
19. 53	45. 30							
19. 59	45. 55							
20. 17	43. 10							
20. 28	44. 5							
20. 46	44. 25							
21. 1	43. 35							
21. 58	45. 45							
22. 29	44. 15							
23. 8	46. 0							
23. 16	47. 30							
23. 25	46. 55							
23. 50	48. 15							
23. 59	47. 40							
Dec. 7		Dec. 7		Dec. 7		Dec. 7		
0. 0	20. 47. 40		(†)	0. 0	·03933	1. 0	51 ·0	52 ·0
0. 16	45. 5	0. 23	·1095	3. 20	·03568	3. 0	52 ·8	54 ·3
0. 33	44. 35	0. 45	·1104	5. 8:	·03360	Max.	54 ·0	54 ·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 7		Dec. 7		Dec. 7		Dec. 7		
h m	° ′ ″	h m		h m		h m	°	°
1. 26	20. 46. 15	1. 10	·1108	7. 3	·03268	9. 0	53 ·0	54 ·0
1. 48	44. 50	1. 59	·1109		·03537	18. 0	51 ·8	52 ·8
1. 54	45. 15	2. 22	·1106	12. 9	·03430	Min.	50 ·4	50 .1
2. 28	44. 30	2. 58	·1109	12. 24	·03443	21. 0	51 ·1	52 ·2
2. 39	43. 45	3. 21	·1104	12. 53	·03432			
3. 0	43. 15	3. 43	·1103	13. 17	·03450			
3. 14	44. 55	4. 17	·1107	13. 33	·03438			
3. 58	43. 5	5. 0	·1108	19. 54	·03539			
4. 26	42. 40	5. 17	·1106	23. 4	·03618			
4. 45	41. 0	5. 39	·1097	23. 59	·03623			
5. 7	40. 55	5. 53	·1098					
5. 22	42. 10	6. 23	·1103					
5. 42	40. 0	7. 12	·1095					
5. 50	40. 35	7. 30	·1113					
6. 4	39. 50	7. 38	·1106					
6. 22	41. 0	8. 0	·1099					
6. 53	40. 25	8. 11	·1106					
7. 8	37. 55	8. 19	·1104					
7. 19	34. 5	8. 45	·1106					
7. 39	40. 15	8. 55	·1105					
7. 56	40. 5	9. 38	·1109					
8. 8	37. 45	9. 51	·1110					
8. 15	39. 10	10. 4	·1112					
8. 24	38. 30	10. 13	·1111					
8. 30	39. 10	10. 44	·1111					
8. 43	38. 25	11. 3	·1108					
9. 38	40. 55	11. 28	·1108					
10. 8	40. 55	11. 37	·1120					
10. 23	40. 5	12. 2	·1117					
10. 57	40. 50	12. 17	·1111					
11. 31	40. 0	12. 30	·1116					
11. 43	40. 55	12. 53	·1096					
12. 9	30. 45	13. 4	·1097					
12. 39	34. 50	13. 28	·1112					
12. 53	34. 0	13. 55	·1108					
12. 59	35. 35	14. 12	·1111					
13. 15	34. 5	14. 23	·1108					
13. 42	43. 5	14. 51	·1108					
14. 4	40. 5	15. 0	·1109					
14. 21	39. 20	15. 12	·1105					
14. 30	37. 5	15. 28	·1106					
14. 45	36. 5	15. 41	·1110					
14. 54	37. 55	17. 27	·1117					
15. 5	37. 30	18. 32	·1097					
15. 13	39. 10	19. 8	·1108					
15. 38	41. 45	19. 22	·1108					
15. 50	44. 10	19. 43	·1098					
16. 5	42. 30	20. 7	·1100					
16. 36	40. 45	20. 29	·1107					
17. 27	41. 25	20. 40	·1105					
17. 48	40. 40	21. 30	·1109					
18. 11	43. 10	21. 43	·1107					
18. 19	43. 5	22. 16	·1108					
18. 29	46. 15	22. 25	.1111					
18. 34	46. 25	23. 9	·1108					
18. 57	50. 30	23. 59	·1086					
19. 28	50. 0							
19. 32	50. 20							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 7								
h m	° ′ ″	h m		h m		h m	°	°
19. 53	20. 48. 30							
19. 58	49. 0							
20. 10	48. 10							
20. 17	48. 40							
20. 30	47. 0							
21. 0	47. 5							
21. 27	44. 25							
22. 22	43. 15							
22. 43	45. 55							
22. 53	45. 35							
22. 59	47. 10							
23. 10	46. 55							
23. 15	48. 0							
23. 39	47. 50							
23. 53	49. 5							
23. 59	48. 40							
Dec. 8		Dec. 8		Dec. 8		Dec. 8		
0. 0	20. 48. 40	0. 0	·1086	0. 0	·03623	1. 0	51 ·2	52 ·2
0. 22	50. 5	0. 43	·1086	1. 9	·03665	3. 0	52 ·0	53 ·0
0. 37	48. 50	0. 48	·1078	2. 59	·03638	Max.	52 ·2	53 ·0
0. 45	49. 45	0. 54	·1087	4. 21	·03560	9. 0	52 ·0	53 ·0
0. 51	45. 50	1. 25	·1099	6. 30	·03510	Min.	51 ·0	50 ·7
0. 56	46. 45	1. 57	·1098	9. 19	·03518	18. 0	51 ·5	52 ·7
1. 0	46. 5	2. 13	·1104		·03755	21. 0	51 ·5	53 ·0
1. 13	46. 20	2. 32	·1104	12. 45	·03742	22. 0	51 ·9	53 ·1
1. 22	45. 30	2. 50	·1108	17. 52	·03760	23. 0	52 ·5	54 ·0
1. 44	45. 55	3. 9	·1106	22. 9	·03710			
1. 54	45. 5	3. 52	·1107	23. 59	·03625			
2. 7	46. 0	4. 43	·1111					
3. 18	43. 35	5. 8	·1108					
3. 31	43. 45	5. 23	·1103					
3. 43	43. 10	5. 53	·1100					
4. 30	42. 45	6. 19	·1107					
4. 43	41. 55	6. 44	·1105					
5. 16	42. 45	6. 53	·1103					
5. 41	39. 45	7. 32	·1101					
5. 52	39. 45	7. 53	·1102					
6. 7	38. 35	8. 11	·1106					
6. 21	40. 15	8. 24	·1106					
6. 44	39. 25	8. 34	·1108					
6. 48	39. 45	8. 51	·1108					
7. 0	39. 20	9. 18	·1113					
7. 21	41. 20	9. 38	·1114					
7. 27	40. 35	9. 57	·1130					
7. 45	41. 40	10. 13	·1124					
8. 16	41. 10	10. 26	·1113					
8. 32	39. 55	10. 49	·1110					
9. 9	38. 10	11. 3	·1114					
9. 20	38. 25	11. 42	·1106					
9. 30	37. 0	11. 53	·1107					
9. 47	36. 55	12. 54	·1104					
9. 57	34. 30	13. 32	·1107					
10. 6	36. 55	13. 59	·1105					
10. 16	36. 5	14. 21	·1107					
10. 23	36. 45	15. 12	·1105					
10. 34	36. 15	15. 31	·1107					
10. 47	38. 40	15. 44	·1106					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁚ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 8		Dec. 8						
h m	° ′ ″	h m		h m		h m	°	°
11. 18	20. 36. 45	17. 26	·1115					
11. 46	38. 45	17. 55	·1118					
11. 57	40. 5	18. 22	·1115					
12. 20	38. 45	18. 46	·1117					
12. 44	39. 25	19. 32	·1117					
13. 22	43. 5	19. 53	·1114					
13. 38	42. 30	20. 8	·1115					
14. 23	42. 15	20. 26	·1113					
	***	21. 8	·1112					
15. 47	44. 50	21. 29	·1111					
16. 4	44. 30	22. 9	·1106					
16. 21	43. 10	22. 30	·1097					
16. 33	43. 0	22. 53	·1104					
16. 41	43. 35	23. 23	·1104					
16. 54	42. 10	23. 32	·1107					
17. 1	42. 35	23. 52	·1105					
17. 12	42. 5	23. 59	·1105					
17. 15	43. 15							
17. 33	41. 55							
18. 13	42. 20							
18. 28	41. 30							
18. 52	41. 55							
19. 28	41. 45							
19. 37	42. 25							
19. 54	40. 30							
20. 12	41. 50							
20. 24	41. 5							
20. 43	40. 40							
22. 39	42. 15							
23. 6	45. 5							
23. 47	46. 30							
23. 59	45. 35							
Dec. 9		Dec. 9		Dec. 9		Dec. 9		
0. 0	20. 45. 35	0. 0	·1105	0. 0	·03625	0. 0	53 ·2	54 ·7
0. 28	46. 50	0. 9	.1106	0. 37	·03580	1. 0	53 ·6	53 ·0
1. 0	45. 30	0. 50	·1099	2. 54	·03460	2. 0	54 ·2	54 ·5
1. 32	45. 15	1. 30	·1102	5. 21	·03238	3. 0	54 ·8	56 ·0
	***	2. 13	·1097	7. 53	·03159	6. 0	56 ·0	56 ·8
1. 57	46. 10	2. 47	·1099	8. 0	·03165	Max.	56 ·6	57 ·9
2. 25	44. 35	3. 33	·1098	9. 14	·03140	9. 0	56 ·6	57 ·9
3. 3	45. 50	4. 18	·1104		·03320	12. 0	55 ·2	56 ·2
3. 30	43. 55	5. 15	·1105	10. 58	·03250	18. 45	50 ·3	52 ·0
3. 45	44. 20	5. 31	·1104	12. 36:	·03323	Min.	47 ·2	46 ·4
3. 58	43. 10	5. 58	·1104	14. 31	·03473	21. 5	49 ·0	50 ·7
4. 44	41. 45	6. 10	·1106	20. 10	·04033	22. 0	48· 8	50 ·5
5. 17	42. 5	6. 25	·1105	22. 30	·04108	23. 0	49 ·3	50 ·8
8. 16	39. 20	6. 45	·1106	23. 59	·04115			
8. 23	39. 50	7. 2	·1105					
8. 32	39. 5	7. 55	·1106					
8. 40	39. 35	8. 31	·1105					
9. 46	39. 10	8. 44	·1102					
10. 12	38. 0	9. 16	·1104					
10. 37	37. 45	9. 52	·1102					
10. 42	38. 30	10. 16	·1107					
11. 2	37. 25	10. 32	·1106					
11. 30	39. 30	10. 44	·1107					
13. 23	42. 15	11. 32	·1104					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 9		Dec. 9						
h m	° ′ ″	h m		h m		h m	°	°
14. 13	20. 41. 45	11. 45	·1106					
15. 1	43. 30	11. 57	·1105					
15. 23	42. 15	12. 38	·1107					
16. 26	42. 30	12. 49	·1106					
16. 34	43. 5	13. 43	·1108					
16. 45	42. 0	14. 6	·1107					
18. 10	41. 30	16. 27	·1112					
21. 8	42. 5	16. 37	·1110					
21. 22	41. 30	17. 3	·1114					
21. 53	43. 30	18. 15	·1116					
22. 1	42. 0	18. 30	·1115					
22. 5	43. 20	19. 30	·1114					
22. 17	43. 0	20. 12	·1115					
22. 32	46. 0	21. 33	·1113					
22. 48	44. 30	22. 0	·1118					
22. 56	46. 5	22. 6	·1112					
23. 9	45. 45	22. 12	·1117					
23. 16	46. 25	22. 22	·1113					
23. 25	44. 35	22. 38	·1121					
23. 59	46. 0	22. 55	·1114					
		23. 4	·1117					
		23. 13	·1114 (†)					
Dec. 10		Dec. 10		Dec. 10		Dec. 10		
0. 0	20. 46. 0		(†)	0. 0	·04115	0. 0	49 ·7	51 ·2
0. 8	45. 45	0. 25	·1114	2. 28	·04050	1. 0	50 ·3	51 ·5
0. 16	46. 0	0. 38	·1110	5. 40:	·03821	3. 0	51 ·5	53 ·3
0. 36	44. 30	1. 17	·1118	8. 43	·03766	Max.	53 ·4	53 ·9
0. 45	45. 0	1. 38	·1116	13. 31	·03850	9. 0	51 ·5	52 ·6
0. 57	44. 40	1. 56	·1118	13. 53	·03843	18. 0	49 ·9	51 ·1
1. 8	45. 35	2. 38	·1114	22. 23:	·03958	Min.	49 ·1	48 ·9
1. 33	45. 0	3. 27	·1111	23. 59	·03907	21. 0	49 ·8	51 ·0
1. 48	45. 55	4. 2	·1092					
2. 6	44. 40	4. 38	·1103					
2. 15	45. 25	5. 13	·1100					
2. 43	45. 0	5. 28	·1095					
3. 30	44. 50	5. 55	·1092					
3. 47	43. 10	6. 8	·1095					
4. 0	40. 45	6. 37	·1090					
4. 5	40. 25	7. 7	·1100					
4. 15	39. 10	7. 15	·1100					
4. 24	39. 30	7. 38	·1107					
5. 12	47. 10	7. 53	·1104					
5. 19	46. 30	8. 23	·1109					
5. 24	47. 5	8. 42	·1106					
5. 49	44. 5	9. 16	·1109					
5. 58	43. 30	9. 51	·1112					
6. 22:	45. 45	10. 20	·1107					
6. 38	43. 35	10. 45	·1107					
6. 43	43. 55	11. 2	·1110					
6. 57	42. 50	11. 18	·1107					
7. 31	41. 0	11. 28	·1110					
7. 51	41. 45	11. 53	·1106					
8. 8	41. 10	12. 12	·1106					
8. 23	41. 5	12. 32	·1110					
8. 44	39. 5	13. 8	·1107					
9. 7	40. 30	13. 23	·1109					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Dec. 10 h m	° ′ ″
9. 22	20. 40. 25
9. 43	41. 5
9. 56	40. 30
10. 15	41. 25
10. 38	41. 5
10. 56	41. 35
11. 13	38. 20
11. 36	40. 10
11. 58	39. 5
12. 21	40. 45
12. 44	41. 45
12. 57	40. 45
13. 6	41. 35
13. 22	41. 0
13. 30	42. 35
13. 38	42. 50
14. 2	39. 55
14. 23	39. 0
14. 45	38. 40
15. 6	39. 20
15. 46	41. 0
16. 13	40. 15
16. 22	41. 5
16. 56	40. 20
17. 47	42. 30
18. 32	42. 0
19. 21	42. 10
19. 30	42. 45
20. 22	42. 5
20. 34	42. 35
21. 2	41. 30
21. 54	42. 35
22. 7	42. 20
22. 40	44. 10
23. 15	43. 45
23. 25	44. 15
23. 59	44. 10
Dec. 11	
0. 0	20. 44. 10
1. 32	45. 30
2. 1	46. 30
2. 26	45. 15
3. 22	45. 10
3. 55	43. 15
4. 6	41. 35
4. 13	41. 40
4. 27	40. 25
4. 45	42. 20
5. 12	44. 5
5. 43	42. 55
6. 52	43. 10
7. 7	42. 40
7. 9	41. 5
9. 28	39. 30
9. 52	34. 0
10. 38	40. 10
10. 58	41. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 10 h m	
13. 47	·1119
14. 26	·1115
15. 17	·1112
16. 23	·1116
17. 40	·1114
18. 31	·1116
18. 56	·1114
19. 38	·1114
19. 55	·1116
20. 9	·1115
20. 25	·1113
20. 36	·1114
21. 0	·1112
21. 12	·1114
21. 35	·1112
22. 15	·1111
22. 38	·1114
23. 15	·1111
23. 40	·1111
23. 59	·1114
Dec. 11	
0. 0	·1114
0. 8	·1114
	(†)
0. 53	·1113
1. 4	·1111
1. 29	·1114
2. 23	·1109
2. 59	·1109
3. 28	·1105
3. 52	·1107
4. 17	·1098
4. 43	·1110
5. 7	·1109
6. 9	·1113
6. 57	·1108
8. 11	·1107
8. 27	·1109
8. 47	·1108
9. 27	·1109

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Dec. 11 h m	
0. 0	·03907
2. 52	·03693
5. 13:	·03495
9. 30	·03383
14. 30	·03318
16. 43	·03305
19. 51	{·03280 ·03365
22. 43	·03329
23. 59	·03220

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 11 h m	°	°
1. 0	51·5	53·0
3. 0	52·9	54·1
Max.	54·0	54·6
9. 0	53·3	54·3
18. 40	53·0	54·3
Min.	52·4	52·3
21. 5	53·1	54·2

Greenwich Mean Solar Time.	Western Declination.
Dec. 11 h m	° ′ ″
11. 31	20. 40. 30
12. 13	40. 45
12. 30	41. 20
12. 44	40. 50
13. 33	42. 30
13. 52	42. 0
14. 7	42. 45
14. 36	42. 10
15. 11	44. 10
15. 23	42. 0
15. 37	43. 25
15. 53	41. 20
16. 14	41. 20
16. 24	43. 35
16. 43	42. 30
16. 57	42. 30
17. 15	44. 15
17. 23	43. 35
17. 46	44. 0
18. 0	43. 0
18. 8	43. 30
18. 23	41. 50
19. 3	41. 10
19. 35	42. 5
20. 30	41. 55
20. 42	41. 15
20. 44	42. 30
20. 57	42. 35
21. 28	44. 0
21. 58	42. 15
22. 3	43. 35
22. 34	43. 20
22. 40	41. 35
22. 53	47. 0
22. 58	46. 35
23. 1	48. 50
23. 15	49. 30
23. 25	48. 25
23. 56	46. 30
23. 59	47. 10
Dec. 12	
0. 0	20. 47. 10
0. 17	46. 0
0. 38	49. 30
0. 45	48. 55
0. 57	51. 50
1. 9	50. 55
	(†)
2. 12	48. 30
2. 24	51. 0
2. 38	48. 30
2. 43	49. 15
3. 34	44. 25
3. 43	46. 10
3. 53	46. 5
4. 5	47. 0
4. 37	44. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Dec. 11 h m	
9. 49	·1118
10. 15	·1108
11. 17	·1112
12. 7	·1110
12. 23	·1112
12. 47	·1111
13. 4	·1111
13. 21	·1109
13. 43	·1111
13. 55	·1110
14. 18	1114
14. 30	·1111
14. 54	·1111
15. 7	·1114
15. 16	·1111
15. 27	·1115
15. 39	·1114
15. 56	·1115
16. 18	·1114
16. 48	·1118
17. 4	·1117
17. 32	·1121
17. 58	·1122
18. 14	·1119
19. 3	·1116
19. 27	·1120
20. 22	·1114
20. 46	·1107
21. 22	·1108
21. 45	·1106
22. 19	·1110
22. 39	·1099
22. 47	·1120
22. 55	·1118
23. 7	·1124
23. 27	·1113
23. 37	·1113
	(†)
Dec. 12	
	(†)
1. 0	·1093*
3. 0	·1103*
3. 24	·1095
3. 46	·1101
4. 22	·1094
4. 58	·1103
5. 9	·1103
5. 39	·1106
6. 1	·1087
6. 10	·1088
6. 29	·1078
6. 38	·1082
6. 44	·1077
7. 8	·1093
7. 38	·1103

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Dec. 11 h m	
1. 31	·1118
3. 15	·1108
3. 17	·1112
3. 10	·1110
3. 30	·1112
3. 52	·1111
4. 10	·1111
4. 29	·1109
4. 41	·1111
4. 55	·1110
5. 18	1114
5. 30	·1111
5. 54	·1111
6. 7	·1114
6. 16	·1111
6. 27	·1115
6. 39	·1114
6. 56	·1115
7. 18	·1114
7. 48	·1118
8. 4	·1117
8. 32	·1121
8. 58	·1122
9. 14	·1119
9. 33	·1116
9. 27	·1120
10. 22	·1114
10. 46	·1107
11. 22	·1108
11. 45	·1106
12. 19	·1110
12. 39	·1099
12. 47	·1120
12. 55	·1118
13. 7	·1124
13. 27	·1113
13. 37	·1113
Dec. 12	
0. 0	·03220
2. 6	·03170
2. 26	·03178
3. 1	{·03157 ·03350
4. 41	·03230
6. 8	·03200
7. 8	·03236
8. 0	·03210
11. 14	·03196
12. 56	·03263
13. 27	·03270
16. 38	·03395
16. 59	·03383
19. 52	·03614
23. 45	·04110

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 12 h m	°	°
1. 0	55·5	56·5
3. 0	56·6	57·5
Max.	57·2	57·5
9. 0	56·2	57·2
Min.	48·6	48·2
21. 36	50·5	52·3

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Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 12		Dec. 12		Dec. 12				
h m	° ′ ″	h m		h m		h m	°	°
4. 57	20. 44. 30	8. 7	·1099	23. 59	·04114			
5. 27	42. 50	8. 32	·1102					
5. 44	45. 25	9. 8	·1100					
5. 52	44. 40	9. 30	·1096					
6. 2	42. 50	9. 39	·1101					
6. 11	44. 5	9. 44	·1099					
6. 27	38. 0	10. 12	·1120					
6. 39	37. 20	10. 28	·1118					
6. 47	34. 25	10. 42	·1124					
6. 57	34. 30	10. 52	·1117					
7. 20	38. 40	11. 0	·1122					
7. 29	38. 30	11. 18	·1102					
7. 42	39. 35	11. 42	·1090					
8. 2	38. 30	12. 9	·1100					
8. 37	38. 55	12. 26	·1098					
9. 10	38. 15	12. 44	·1099					
9. 19	36. 30	13. 13	·1111					
9. 26	32. 50	13. 28	·1113					
9. 47	29. 15	14. 8	·1105					
10. 14	21. 25	14. 41	·1102					
10. 26	24. 5	14. 49	·1104					
10. 32	21. 5	14. 57	·1103					
10. 45	26. 30	15. 7	·1106					
10. 57	25. 10	15. 19	·1108					
10. 59	25. 45	15. 30	·1102					
11. 3	25. 30	15. 38	·1103					
11. 17	31. 10	15. 52	·1098					
11. 27	30. 50	16. 37	·1118					
11. 50	33. 35	16. 44	·1125					
12. 16	31. 10	17. 1	·1123					
12. 40	39. 10	17. 21	·1124					
12. 58	42. 0	17. 30	·1115					
13. 4	41. 25	17. 44	·1128					
13. 12	42. 30		***					
13. 30	41. 50	18. 16	·1124					
13. 42	39. 45	18. 49	·1093					
14. 8	42. 35	19. 10	·1102					
14. 13	44. 15	19. 21	·1111					
14. 20	43. 50	19. 35	·1112					
14. 30	45. 0	20. 6	·1098					
14. 42	43. 10	20. 19	·1104					
	***	20. 47	·1086					
15. 0	43. 50	21. 35	·1077					
15. 10	43. 25	21. 44	·1086					
15. 32	46. 0	21. 53	·1081					
15. 53	44. 45		(†)					
15. 57	45. 30	23. 11	·1106					
16. 2	44. 30	23. 30	·1112					
16. 13	49. 5	23. 46	·1110					
16. 17	48. 50	23. 59	·1110					
16. 42	54. 25							
16. 52	54. 0							
17. 7	49. 50							
17. 26	46. 40							
17. 32	48. 35							
17. 45	44. 15							
17. 58	48. 5							
18. 7	48. 20							
18. 28	20. 52. 20							
18. 31	54. 25							
18. 49	53. 55							
18. 58	50. 25							
19. 3	52. 20							
19. 10	51. 20							
19. 15	52. 20							
19. 32	52. 5							
19. 55	48. 5							
20. 12	46. 25							
20. 23	49. 5							
20. 43	48. 10							
20. 53	46. 45							
	***							
21. 27	46. 30							
22. 15	48. 0							
22. 28	47. 30							
22. 55	51. 50							
23. 0	50. 10							
23. 5	51. 55							
23. 17	47. 35							
23. 21	48. 20							
23. 31	44. 50							
23. 46	43. 55							
23. 56	43. 50							
23. 59	44. 30							
Dec. 13		Dec. 13		Dec. 13		Dec. 13		
0. 0	20. 44. 30	0. 0	·1110	0. 0	·04114	1. 0	49·5	51·2
0. 17	45. 5	0. 14	·1111	1. 22	·04112	Max.	49·5	51·2
0. 30	44. 30	0. 47	·1116	2. 44	·04130	8. 30	49·3	51·0
1. 5	47. 10	1. 3	·1112	5. 54	·04098	18. 15	47·4	48·6
1. 23	45. 55	1. 24	·1108	7. 32	·04083	Min.	45·8	45·3
1. 47	46. 0	1. 43	·1109	7. 54	·04095	21. 0	46·3	47·7
2. 0	44. 10	2. 3	·1101	8. 17	·04064			
2. 16	44. 50	2. 19	·1100	10. 24	·04108			
2. 33	40. 10	2. 30	·1094	10. 43	·04097			
2. 48	43. 0	2. 42	·1100	16. 23	·04195			
3. 4	42. 30	2. 59	·1097	22. 52	·04223			
3. 30	43. 45	3. 20	·1103	23. 30	·04200			
3. 47	43. 10	4. 14	·1101	23. 59	·04170			
4. 1	43. 30	5. 26	·1103					
4. 25	42. 10	5. 40	·1099					
4. 47	43. 5	5. 53	·1102					
5. 2	42. 45	6. 8	·1096					
5. 23	43. 30	6. 27	·1104					
5. 42	42. 0	6. 36	·1102					
5. 52	42. 30	6. 49	·1102					
6. 3	39. 25	7. 8	·1107					
6. 20	39. 30	7. 32	·1100					
6. 32	37. 15	7. 58	·1138					
6. 45	37. 10	8. 9	·1112					
7. 7	41. 40	8. 17	·1109					
7. 13	41. 55	8. 28	·1120					
7. 19	39. 0	8. 58	·1102					
7. 26	37. 30	9. 17	·1107					
7. 33	34. 15	9. 26	·1105					
7. 55	45. 0	9. 49	·1113					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 13		Dec. 13						
h m	° ′ ″	h m		h m		h m	°	°
8. 15	20. 35. 5	10. 8	·1106					
8. 37	41. 15	10. 26	·1123					
9. 33	36. 0	10. 46	·1107					
9. 47	40. 25	11. 3	·1113					
10. 3	40. 30	11. 40	·1111					
10. 29	42. 0	11. 56	·1114					
11. 1	38. 10	12. 13	·1113					
11. 13	39. 35	12. 25	·1109					
11. 43	39. 10	12. 58	·1110					
12. 2	40. 25	13. 9	·1111					
12. 12	40. 10	13. 34	·1109					
12. 32	41. 55	13. 42	·1110					
13. 6	41. 0	13. 57	·1109					
13. 28	42. 15	14. 47	·1112					
13. 41	42. 0	15. 32	·1112					
14. 13	43. 0	15. 59	·1107					
15. 0	42. 15	16. 31	·1114					
15. 45	43. 10	16. 41	·1113					
16. 1	44. 10	16. 46	·1116					
16. 28	43. 15	16. 56	·1114					
16. 37	43. 40	17. 13	·1117					
16. 48	42. 40	17. 39	·1115					
16. 56	43. 20	18. 0	·1117					
17. 7	42. 30	18. 18	·1116					
17. 44	44. 0	19. 0	·1118					
17. 58	43. 15	19. 9	·1120					
18. 13	44. 0	19. 38	·1118					
18. 27	43. 25	19. 51	·1121					
18. 52	44. 5	20. 26	·1118					
19. 42	43. 30	20. 37	·1120					
20. 38	43. 25	20. 58	·1115					
21. 4	42. 30	21. 24	·1114					
22. 36	44. 50	21. 49	·1117					
23. 15	44. 15	22. 23	·1113					
23. 32	46. 45		(†)					
23. 59	45. 40							
Dec. 14		Dec. 14		Dec. 14		Dec. 14		
0. 0	20. 45. 40		(†)	0. 0	·04170	1. 0	49 ·6	51 ·2
0. 5	45. 25	0. 30	·1111	1. 37	·03992	3. 0	52 ·0	54 ·0
0. 38	46. 30	0. 41	·1112	4. 45:	·03412	Max.	55 ·0	55 ·9
0. 48	45. 40	1. 5	·1108	7. 28	·03238	9. 0	52 ·0	53 ·4
1. 3	45. 45	1. 24	·1106	11. 23	·03310	18. 20	48 ·5	50 ·1
1. 42	43. 5	1. 45	·1110	12. 45	·03400	Min.	47 ·2	47 ·1
2. 41	44. 5	1. 53	·1111	17. 24:	·03710	21. 0	48 ·2	50 ·0
3. 7	42. 25	2. 35	·1113	21. 7	·03846			
3. 38	42. 45	2. 48	·1108	22. 55	·03854			
3. 51	41. 55	3. 25	·1106	23. 59	·03794			
3. 59	42. 10	3. 43	·1109					
4. 32	41. 15	4. 36	·1106					
4. 50	42. 35	5. 0	·1107					
5. 2	41. 15	5. 8	·1110					
5. 20	42. 20	5. 26	·1107					
5. 43	42. 25	5. 38	·1108					
5. 52	41. 20	6. 5	·1106					
6. 7	40. 35	6. 28	·1110					
6. 32	37. 45	6. 40	·1116					
6. 51	37. 55	7. 11	·1109					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 14		Dec. 14						
h m	° ′ ″	h m		h m		h m	°	°
7. 3	20. 41. 15	8. 5	·1106					
7. 13	40. 35	8. 21	·1109					
7. 27	41. 35	8. 40	·1106					
7. 41	40. 35	8. 50	·1108					
7. 55	40. 25	9. 19	·1106					
8. 1	40. 55	9. 37	·1111					
8. 13	39. 10	9. 56	·1110					
8. 30	40. 10	10. 10	·1112					
9. 2	39. 15	10. 37	·1111					
9. 11	39. 55	10. 55	·1116					
9. 27	39. 15	11. 16	·1113					
9. 46	39. 50	11. 42	·1115					
10. 26	39. 20	11. 51	·1114					
10. 57	40. 35	12. 7	·1114					
11. 18	39. 10	12. 26	·1120					
11. 29	39. 30	12. 42	·1115					
11. 45	41. 40	12. 55	·1113					
12. 6	40. 10	13. 9	·1114					
12. 25	42. 50	13. 18	·1113					
12. 31	41. 40	14. 0	1113					
12. 37	42. 30	14. 25	·1115					
12. 45	40. 55	16. 5	·1116					
12. 59	40. 20	16. 22	·1118					
13. 15	41. 45	17. 25	·1117					
13. 24	41. 0	17. 45	·1119					
13. 45	41. 30	18. 5	·1117					
14. 28	41. 25	18. 36	·1118					
15. 33	42. 40	18. 39	·1120					
15. 47	42. 0	18. 45	·1117					
16. 11	42. 30	19. 14	·1120					
16. 34	41. 55	19. 55	·1118					
16. 44	42. 50	20. 14	·1119					
17. 13	42. 15	20. 26	·1117					
17. 33	43. 30	21. 8	·1114					
18. 5	42. 40		(†)					
19. 9	43. 20	22. 58	·1112					
19. 58	41. 50	23. 12	·1112					
21. 8	41. 0	23. 24	·1110					
	(†)	23. 39	·1111					
22. 52	43. 10		(†)					
23. 19	44. 5							
23. 23	43. 40							
23. 59	45. 10							
Dec. 15		Dec. 15		Dec. 15		Dec. 15		
0. 0	20. 45. 10		(†)	0. 0	·03794	1. 0	50 ·0	51 ·6
0. 7	45. 40	0. 37	·1112	2. 42	·03666	3. 0	50 ·7	52 ·3
0. 15	44. 45	0. 59	·1115	5. 25:	·03483	Max.	52 ·1	53 ·0
0. 39	43. 55	1. 22	·1115	8. 6	·03426	9. 0	51 ·2	52 ·0
0. 56	44. 35	1. 39	·1114	11. 17	·03406	Min.	49 ·0	48 ·9
1. 37	44. 20	2. 37	·1118	13. 49	·03423	18. 45	49 ·9	51 ·0
1. 57	43. 0	2. 46	·1117	21. 51:	·03540	21. 0	49 ·9	51 ·0
2. 37	44. 0	3. 56	·1117	23. 59	·03485	22. 0	50 ·0	51 ·4
	***	4. 22	·1115			23. 0	50 ·5	52 ·0
5. 42	42. 0	4. 36	·1117					
6. 23	42. 35	5. 0	·1116					
6. 39	41. 50	5. 22	·1118					
7. 2	41. 35	5. 38	·1115					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 15		Dec. 15						
h m	° ′ ″	h m		h m		h m	°	°
7. 20	20. 38. 40	5. 45	·1117					
7. 28	34. 35	6. 11	·1114					
7. 42	32. 15	6. 44	·1112					
7. 50	33. 50	6. 53	·1114					
7. 59	32. 15	7. 26	·1111					
8. 19	36. 35	7. 48	·1122					
8. 31	37. 35	8. 8	·1120					
8. 47	37. 5	8. 26	·1121					
8. 53	37. 45	8. 42	·1113					
9. 3	36. 30	9. 0	·1110					
9. 31	38. 50	9. 21	·1110					
10. 16	39. 25	9. 40	·1105					
10. 31	40. 10	9. 49	·1108					
10. 48	39. 45	10. 13	·1108					
11. 12	40. 40	10. 28	·1113					
11. 35	38. 35	10. 35	·1112					
12. 53	41. 55	10. 52	·1113					
13. 6	43. 35	10. 59	·1115					
13. 27	43. 55	11. 14	·1112					
14. 2	41. 0	11. 25	·1113					
14. 30	40. 50	11. 38	·1112					
15. 7	42. 10	11. 59	·1115					
15. 33	41. 35	12. 39	·1114					
16. 12	41. 35	13. 25	·1123					
17. 6	42. 35	14. 15	·1117					
18. 29	42. 50	14. 39	·1116					
20. 56	41. 5	17. 39	·1122					
	***	18. 46	·1120					
22. 48	43. 45	19. 31	·1122					
22. 56	44. 35	19. 43	·1121					
23. 3	43. 55	20. 13	·1121					
23. 27	45. 20	20. 22	·1119					
23. 45	44. 35	21. 8	·1115					
23. 59	44. 30	21. 46	·1114					
		22. 31	·1110					
		23. 8	·1110					
		23. 33	·1114					
		23. 44	·1112					
		23. 59	·1113					
Dec. 16		Dec. 16		Dec. 16		Dec. 16		
0. 0	20. 44. 30	0. 0	·1113	0. 0	·03485	0. 0	51 ·0	52 ·5
1. 16	44. 50	0. 33	·1113	2. 23	·03324	1. 0	51 ·5	53 ·0
3. 57	41. 25	0. 47	·1115	5. 8	·03290	3. 0	52 ·2	53 ·7
4. 53	41. 15	1. 17	·1117		·03482	Max.	52 ·2	53 ·7
5. 23	41. 40	1. 56	·1117	10. 8:	·03608	6. 0	52 ·0	53 ·0
8. 43	40. 25	2. 9	·1116	12. 58	·03862	9. 0	50 ·5	52 ·0
	***	2. 43	·1116	16. 47	·04244	12. 0	48 ·4	50 ·0
12. 29	40. 35	3. 32	·1118	22. 22	·04285	Min.	44 ·8	44 ·2
12. 38	41. 35	7. 4	·1120	23. 59	·04148	19. 0	45 ·2	46 ·0
12. 52	40. 20	7. 46	·1118			21. 0	45 ·3	47 ·0
14. 29	42. 0	8. 14	·1119			22. 0	45 ·8	47 ·2
14. 58	41. 15	8. 46	·1118			23. 0	46 ·8	48 ·2
16. 13	42. 5	9. 29	·1118					
18. 19	42. 10	9. 57	·1120					
19. 0	41. 30	10. 9	·1119					
19. 34	41. 30	10. 40	·1120					
20. 48	40. 40	10. 58	·1122					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 16		Dec. 16						
h m	° ′ ″	h m		h m		h m	°	°
23. 41	20 43. 20	11. 16	·1120					
23. 50	44. 15	12. 15	·1121					
23. 59	43. 30	12. 30	·1123					
		12. 45	·1122					
		13. 24	·1122					
		14. 30	·1124					
		14. 53	·1124					
		17. 8	·1127					
		19. 15	·1127					
		20. 55	·1124					
		21. 13	·1127					
		23. 20	·1118					
		23. 59	·1119					
Dec. 17		Dec. 17		Dec. 17		Dec. 17		
0. 0	20. 43. 30	0. 0	·1119	0. 0	·04148	0. 0	47 ·5	49 ·1
1. 8	44. 10	1. 19	·1121	6. 38:	·03597	1. 0	48 ·4	50 ·1
4. 39	41. 5	3. 12	·1122	11. 12	·03690	3. 0	49 ·9	51 ·2
6. 45	41. 40	4. 43	·1124	15. 43:	·03863	Max.	51 ·3	51 ·5
7. 32	43. 0	5. 16	·1126	19. 0	·04138	9. 0	48 ·9	50 ·3
7. 52	42. 10	6. 38	·1127	19. 38	·04168	18. 0	44 ·8	46 ·2
8. 8	42. 55	7. 18	·1126	21. 31	·04326	Min.	42 ·0	41 ·3
8. 16	42. 0	7. 34	·1123		(†)	21. 0	43 ·0	45 ·4
8. 28	42. 45	7. 50	·1124					
8. 38	41. 35	8. 8	·1121					
8. 58	42. 0	8. 19	·1125					
9. 25	41. 15	8. 39	·1115					
9. 31	42. 10	9. 6	·1118					
9. 59	40. 0	9. 24	·1117					
10. 2	40. 20	9. 38	·1122					
10. 35	37. 55	10. 0	·1111					
11. 2	39. 30	10. 24	·1116					
11. 52	38. 30	10. 47	·1116					
12. 18	39. 25	11. 28	·1121					
12. 27	40. 20	11. 40	·1120					
12. 52	39. 30	12. 28	·1121					
13. 15	41. 0	12. 42	·1118					
14. 0	40. 20	13. 28	·1123					
14. 59	42. 5	13. 41	·1121					
15. 11	41. 15	14. 0	·1123					
15. 46	41. 55	14. 13	·1123					
15. 59	41. 25	14. 44	·1126					
16. 52	41. 25	14. 55	·1125					
17. 15	39. 5	15. 37	·1126					
17. 33	39. 50	15. 46	·1128					
17. 56	40. 0	16. 3	·1127					
18. 29	43. 15	16. 43	·1129					
18. 42	43. 50	16. 57	·1131					
18. 52	43. 30	17. 17	·1129					
19. 4	41. 45	17. 42	·1131					
19. 30	43. 25	18. 5	·1128					
19. 52	40. 40	18. 16	·1133					
20. 1	43. 10	18. 30	·1130					
20. 10	42. 20	19. 16	·1148					
20. 25	44. 0	19. 43	·1134					
20. 43	43. 15	20. 23	·1134					
20. 52	43. 50	20. 53	·1133					
21. 2	42. 40	21. 8	·1132					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

December 17. The photographic trace for the Vertical Force Magnet was off the sheet in the direction of increasing force from 21h. 31m. till 1h. 41m. on December 18.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 17		Dec. 17						
h m	° ′ ″	h m		h m		h m	°	°
21. 12	20. 43. 15	21. 20	·1127					
21. 34	39. 35	21. 31	·1129					
21. 45	43. 10	21. 45	·1127					
22. 0	40. 30	21. 54	·1129					
22. 13	44. 5	23. 6	·1124					
22. 40	45. 15		(†)					
22. 54	44. 25							
23. 0	45. 35							
23. 22	46. 5							
23. 30	45. 35							
23. 48	47. 5							
23. 56	46. 5							
23. 59	47. 25							
Dec. 18		Dec. 18		Dec. 18		Dec. 18		
0. 0	20. 47. 25		(†)		(†)	1. 0	45 ·0	47 ·0
0. 17	46. 30	0. 8	·1118	1. 0	·04325*	3. 0	47 ·0	49 ·0
	***	0. 15	·1116	1. 41	·04252	Max.	49 ·2	50 ·4
1. 7	49. 0	1. 1	·1124	2. 51	·04175	9. 0	46 ·2	47 ·5
1. 28	46. 15	1. 20	·1112	6. 59:	·03824	18. 0	44 ·2	46 ·0
2. 6	44. 30	1. 38	·1111	9. 31	·03910	Min.	43 ·9	43 ·5
2. 32	45. 20	2. 1	·1116	9. 43	·03890	21. 0	44 ·8	46 ·1
2. 50	46. 35	2. 56	·1122	10. 15	·03937			
3. 18	46. 10	3. 22	·1117	10. 51	·03937			
4. 21	43. 5	3. 51	·1120	15. 45	·04108			
5. 15	45. 0	4. 4	·1123	19. 3	·04165			
5. 49	43. 30	4. 49	·1123	22. 1	·04155			
6. 0	44. 10	5. 12	·1120	23. 59	·04060			
6. 27	42. 15	6. 0	·1125					
6. 45	43. 30	6. 19	·1123					
7. 15	42. 5	7. 17	·1126					
	***	7. 34	·1123					
9. 30	40. 30	7. 59	·1128					
9. 37	41. 5	8. 34	·1126					
9. 57	27. 10	8. 44	·1128					
10. 9	30. 35	9. 14	·1124					
10. 38	38. 30	9. 30	·1121					
10. 58	35. 30	9. 42	·1111					
11. 28	42. 0	10. 17	·1123					
11. 41	42. 0	10. 38	·1124					
11. 52	40. 25	10. 49	·1116					
12. 2	40. 25	11. 28	·1126					
12. 21	39. 10	12. 10	·1125					
12. 28	39. 25	12. 33	·1120					
12. 37	39. 0	13. 8	·1120					
13. 11	40. 5	13. 27	·1127					
13. 39	42. 35	13. 42	·1124					
14. 4	37. 30	14. 0	·1127					
14. 53	40. 55	15. 22	·1121					
15. 0	39. 5	15. 37	·1122					
15. 12	38. 40	15. 56	·1118					
15. 23	36. 25	16. 13	·1123					
15. 31	36. 0	16. 21	·1122					
15. 43	37. 35	16. 41	·1126					
15. 48	40. 55	17. 2	·1124					
16. 3	40. 30	18. 37	·1123					
16. 16	42. 30	19. 3	·1124					
16. 37	40. 20	19. 45	·1123					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 18		Dec. 18						
h m	° ′ ″	h m		h m		h m	°	°
16. 52	20. 41. 10	21. 0	·1124					
17. 8	40. 10	21. 30	·1123					
17. 27	41. 10	21. 43	·1126					
17. 55	40. 0	22. 10	·1122					
	***	23. 27	·1117					
19. 37	41. 0	23. 37	·1120					
	***	23. 43	·1117					
20. 58	40. 0	23. 59	·1118					
21. 32	40. 20							
21. 42	42. 0							
21. 49	39. 35							
21. 52	41. 50							
22. 0	40. 25							
22. 7	42. 25							
22. 15	41. 30							
	***							
23. 6	42. 45							
23. 33	45. 45							
23. 43	44. 10							
23. 59	45. 25							
Dec. 19		Dec. 19		Dec. 19		Dec. 19		
0. 0	20. 45. 25	0. 0	·1118	0. 0	·04060	1. 0	47 ·6	49 ·0
0. 33	45. 55	0. 28	·1120	1. 45	·03895	3. 0	49 ·3	50 ·7
0. 57	43. 15	0. 56	·1116	4. 23:	·03500	Max.	51 ·0	52 ·0
1. 24	45. 25	1. 28:	·1121	7. 10	·03333	9. 0	50 ·0	51 ·0
1. 56	44. 40	2. 5	·1113	11. 27	·03338	Min.	45 ·6	45 ·3
2. 11	43. 40	2. 57	·1123	15. 41	·03472	22. 0	46 ·6	48 ·0
3. 0	42. 35	3. 52	·1124	20. 0:	·03713			
3. 37	43. 5	4. 36	·1122	23. 59	·03820			
4. 27	41. 20	5. 4	·1124					
4. 43	41. 45	6. 13	·1122					
4. 55	41. 5	6. 48	·1127					
6. 32	41. 10	7. 11	·1121					
7. 0	43. 0	7. 55	·1123					
7. 42	40. 45	8. 46	·1122					
8. 17	40. 45	9. 2	·1124					
9. 55	41. 35	9. 30	·1122					
10. 13	40. 50	9. 45	·1124					
10. 29	41. 35	10. 8	·1123					
10. 49	40. 50	10. 16	·1125					
11. 4	41. 0	10. 51	·1124					
11. 17	40. 5	11. 14	·1126					
11. 41	39. 30	11. 54	·1118					
12. 1	39. 45	12. 8	·1125					
12. 11	38. 10	12. 28	·1119					
12. 23	40. 10	12. 39	·1122					
12. 46	37. 10	12. 54	·1131					
12. 54	39. 5	13. 20	·1127					
13. 0	37. 25	13. 39	·1128					
13. 25	40. 15	14. 4	·1124					
14. 30	34. 25	14. 19	·1123					
14. 46	39. 45	14. 39	·1116					
15. 1	41. 10	14. 49	·1122					
15. 15	39. 30	15. 1	·1111					
15. 21	40. 25	15. 21	·1123					
15. 28	39. 5	15. 24	·1121					
15. 34	39. 45	15. 31	·1123					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 19		Dec. 19						
h m	° ′ ″	h m		h m		h m	°	°
16. 0	20. 37. 15	15. 38	·1121					
16. 9	38. 0	15. 54	·1117					
16. 16	37. 15	16. 28	·1118					
16. 31	39. 5	16. 53	·1123					
17. 13	38. 50	17. 32	·1120					
17. 46	41. 50	17. 54	·1119					
18. 32	41. 50	18. 38	·1124					
18. 38	40. 55	18. 45	·1122					
	***	19. 16	·1123					
19. 11	42. 30	19. 41	·1122					
19. 19	42. 0	20. 22	·1112					
19. 52	41. 35	20. 47	·1111					
19. 58	42. 15	20. 59	·1115					
20. 11	42. 20	21. 13	·1112					
20. 23	45. 10	21. 37	·1117					
20. 33	44. 50	21. 45	·1118					
20. 53	46. 5	21. 54	·1121					
21. 6	44. 10	22. 1	·1118					
21. 17	43. 25	22. 43	·1119					
21. 28	42. 20		(†)					
21. 45	42. 35	23. 38	·1118					
21. 57	41. 5	23. 59	·1117					
23. 21	42. 55							
23. 29	45. 35							
23. 41	46. 30							
23. 59	43. 20							
Dec. 20		Dec. 20		Dec. 20		Dec. 20		
0. 0	20. 43. 20	0. 0	·1117	0. 0	·03820	0. 30	46·5	47·7
0. 17	47. 50	0. 24	·1116	3. 12	·03844	Max.	46·5	48·0
0. 30	45. 25	1. 17	·1122	5. 19	·03817	8. 5	46·5	48·0
0. 58	45. 25	1. 37	·1122	5. 46	·03855	18. 0	45·1	46·8
1. 15	48. 35	1. 57	·1118	6. 19	·03843	Min.	44·6	44·3
1. 28	48. 35	2. 23	·1118	9. 12	·03860	21. 0	45·1	46·8
1. 46	46. 5	2. 41	·1122	11. 38	·03843			
2. 7	45. 10	3. 6	·1116	13. 48	·03866			
2. 15	43. 55	4. 7	·1126	13. 56	·03900			
2. 43	46. 0	4. 23	·1125	15. 20	·03900			
3. 0	43. 50	4. 52	·1130	17. 29	·03997			
3. 13	44. 30	5. 21	·1103	19. 18	·04022			
3. 46	43. 10	5. 52	·1134	23. 8	·03996			
4. 6	43. 50	6. 3	·1131	23. 59	·03903			
4. 39	43. 0	6. 22	·1122					
4. 49	43. 55	6. 52	·1122					
5. 1	42. 25	7. 6	·1129					
5. 17	32. 40	7. 25	·1117					
5. 26	32. 30	7. 35	·1123					
5. 41	35. 25	8. 7	·1104					
5. 48	39. 5	8. 25	·1111					
6. 16	40. 30	8. 37	·1106					
6. 32	43. 15	8. 42	·1110					
6. 55	41. 15	8. 50	·1108					
7. 11	42. 10	9. 0	·1119					
7. 27	42. 10	9. 8	·1120					
7. 38	43. 25	9. 11	·1123					
7. 48	41. 25	9. 24	·1114					
8. 8	33. 25	9. 30	·1118					
8. 30	32. 0	9. 52	·1110					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 20		Dec. 20						
h m	° ′ ″	h m		h m		h m	°	°
8. 47	20. 26. 50	10. 7	·1118					
8. 54	26. 55	10. 15	·1112					
9. 11	25. 25	10. 28	·1115					
9. 19	25. 30	10. 43	·1109					
9. 37	31. 5	10. 56	·1115					
9. 50	31. 25	11. 9	·1109					
10. 3	36. 40	11. 26	·1126					
10. 33	35. 30	12. 8	·1111					
10. 41	37. 50	12. 23	·1115					
10. 48	37. 5	12. 25	·1117					
11. 0	39. 40	13. 5	·1120					
11. 36	33. 5	13. 12	·1118					
11. 56	32. 40	13. 38	·1116					
12. 23	36. 15	13. 51	·1109					
12. 36	39. 55	13. 59	·1116					
12. 54	37. 45	14. 17	·1110					
13. 3	39. 15	14. 31	·1120					
13. 31	37. 50	14. 41	·1119					
13. 42	39. 20	14. 52	·1126					
14. 4	37. 55	15. 1	·1128					
14. 17	45. 0	15. 15	·1122					
14. 36	44. 30	15. 39	·1121					
14. 47	46. 35	15. 50	·1123					
14. 58	45. 35	16. 24	·1117					
15. 12	48. 15		***					
15. 30	42. 25	17. 9	·1120					
15. 38	40. 50	17. 30	·1124					
15. 46	40. 30	17. 43	·1119					
16. 0	38. 55	17. 45	·1124					
16. 21	41. 0	17. 52	·1122					
16. 24	42. 25	18. 3	·1126					
16. 41	41. 55	18. 27	·1123					
16. 51	43. 0	18. 48	·1126					
16. 58	41. 45	19. 15	·1119					
17. 14	42. 30	19. 34	·1120					
17. 23	40. 10	19. 43	·1122					
17. 29	42. 10	19. 52	·1120					
17. 34	41. 30	20. 13	·1120					
17. 43	42. 25	20. 22	·1118					
17. 52	41. 5	20. 49	·1118					
	***	21. 2	·1117					
18. 39	42. 10	21. 21	·1120					
19. 0	40. 45	21. 31	·1113					
	***		***					
19. 46	42. 10	22. 0	·1115					
19. 54	41. 15	22. 35	·1114					
20. 28	40. 30		(†)					
20. 32	41. 25							
21. 0	40. 20							
21. 23	40. 45							
21. 37	39. 10							
21. 57	41. 15							
22. 4	40. 5							
22. 18	41. 45							
22. 23	41. 0							
22. 31	42. 5							
22. 45	41. 30							
22. 53	43. 20							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 2								
h m	° ′ ″	h m		h m		h m	°	°
23. 0	20. 42. 15							
23. 32	45. 25							
23. 52	45. 5							
23. 59	45. 35							
Dec. 21		Dec. 21		Dec. 21		Dec. 21		
0. 0	20. 45. 35		(†)	0. 0	·03903	1. 0	48 ·7	50 ·3
0. 16	46. 50	0. 38	·1109	4. 45	·03292	3. 0	50 ·8	52 ·0
0. 36	45. 10	0. 55	·1110	5. 36	·03283	Max.	52 ·2	55 ·0
0. 43	45. 50	1. 12	·1116	10. 42	·03338	9. 0	50 ·0	51 ·0
0. 59	44. 50	1. 53	·1117	17. 15:	·03458	Min.	48 ·0	47 ·7
1. 42	44. 10	2. 17	·1114	23. 59	·03364	21. 0	49 ·0	50 ·4
2. 10	45. 20	2. 46	·1113					
2. 30	44. 0	3. 8	·1118					
2. 53	40. 55	3. 32	·1112					
3. 14	43. 5	3. 58	·1121					
3. 38	37. 45	5. 0	·1116					
3. 48	39. 15	5. 13	·1118					
3. 56	38. 45	5. 30	·1116					
4. 13	41. 20	5. 45	·1117					
4. 22	41. 15	6. 0	·1114					
4. 30	42. 45	6. 48	·1106					
4. 45	41. 20	7. 0	·1121					
4. 57	43. 0	7. 13	·1120					
5. 7	42. 20	7. 22	·1128					
5. 23	42. 50	7. 44	·1116					
5. 42	41. 50	7. 57	·1118					
6. 22	41. 25	8. 32	·1110					
6. 42	38. 45	9. 1	·1129					
6. 57	32. 5	9. 23	·1132					
7. 9	35. 5	9. 32	·1132					
7. 16	34. 0	9. 58	·1116					
7. 36	39. 45	10. 45	·1117					
7. 56	39. 45	10. 57	·1118					
8. 15	40. 45	11. 24	·1118					
8. 38	39. 40	11. 49	·1120					
8. 54	37. 50	13. 38	·1120					
9. 3	39. 35	14. 51	·1117					
9. 15	31. 55	15. 11	·1120					
9. 24	34. 30	15. 27	·1117					
9. 30	36. 0	17. 13	·1122					
9. 56	39. 20	18. 16	·1121					
10. 2	38. 35	18. 46	·1123					
10. 32	40. 30	19. 2	·1121					
10. 52	39. 0	19. 32	·1123					
10. 57	38. 30	20. 3	·1119					
11. 39	41. 5	20. 22	·1119					
12. 15	40. 55	20. 55	·1112					
13. 30	42. 55	21. 9	·1111					
13. 39	42. 20	21. 28	·1115					
14. 24	42. 45	21. 44	·1113					
14. 33	43. 10	21. 54	·1115					
14. 43	45. 0	23. 53	·1114					
15. 7	42. 35		(†)					
15. 21	43. 30							
15. 45	42. 35							
16. 0	43. 40							
16. 13	43. 5							
Dec. 21								
h m	° ′ ″	h m		h m		h m	°	°
16. 28	20. 43. 5							
16. 47	41. 30							
18. 10	41. 25							
18. 23	42. 50							
18. 45	42. 5							
	***							
19. 46	41. 30							
20. 28	42. 25							
20. 43	41. 30							
21. 7	42. 25							
21. 58	42. 0							
22. 15	42. 25							
22. 28	42. 0							
23. 8	44. 15							
23. 20	47. 0							
23. 41	47. 25							
23. 59	46. 30							
Dec. 22		Dec. 22		Dec. 22		Dec. 22		
0. 0	20. 46. 30	0. 0	·1112	0. 0	·03364	1. 0	49 ·8	51 ·8
1. 13	46. 30	0. 32	·1114	0. 24	·03342	3. 0	50 ·4	52 ·5
1. 35	45. 30	0. 40	·1112		(†)	Max.	51 ·0	52 ·5
2. 15	45. 55	1. 27	·1114	1. 7	·03523	9. 0	46 ·3	48 ·0
2. 28	44. 0	1. 39	·1116	2. 53	{·03455	18. 5	38 ·5	40 ·2
2. 38	43. 55	2. 0	·1110		{·03490	Min.	37 ·2	36 ·4
3. 7	45. 0	2. 13	·1111	4. 15:	·03435	21. 0	37 ·9	39 ·9
3. 49	44. 20	2. 23	·1104	6. 39	{·03556	22. 0	38 ·8	40 ·2
4. 26	44. 20	3. 0	·1105		{·03605	23. 0	39 ·1	41 ·0
4. 53	42. 35	3. 12	·1103	12. 30	·04310			
5. 40	42. 0	3. 52	·1109		(†)			
5. 52	36. 20	4. 27	·1106	21. 0	·04655			
5. 58	39. 30	4. 43	·1110					
	***	5. 9	·1107					
6. 7	36. 55	5. 43	·1110					
6. 11	37. 45	5. 58	·1131					
6. 15	37. 10	6. 7	·1128					
6. 19	38. 35	6. 14	·1133					
6. 29	36. 20	6. 24	·1124					
6. 43	39. 0	6. 35	·1127					
6. 53	38. 0	7. 17	·1109					
6. 59	39. 30	7. 30	·1109					
7. 16	38. 30	7. 42	·1105					
7. 30	39. 25	7. 54	·1110					
7. 37	38. 15	8. 12	·1108					
7. 43	38. 45	8. 19	·1111					
8. 21	34. 30	8. 43	·1102					
8. 34	35. 30	9. 15	·1113					
8. 44	37. 55	9. 44	·1117					
9. 0	35. 30	9. 57	·1112					
9. 28	34. 10	10. 38	·1116					
10. 13	38. 40	11. 8	·1119					
10. 22	38. 0	11. 15	·1124					
10. 36	39. 0	11. 26	·1122					
11. 8	38. 10	11. 38	·1128					
11. 16	39. 35	11. 54	·1123					
11. 37	40. 0	12. 35	·1127					
11. 55	43. 10	12. 57	·1124					
12. 12	40. 30	13. 15	·1126					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 22. The Vertical Force Photographic Trace was off the sheet in the direction of increasing force from $12^h.\ 30^m.$ till $1^h.\ 30^m.$ on December 23.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 22		Dec. 22						
h m	° ′ ″	h m		h m		h m	°	°
13. 43	20. 41. 10	13. 30	·1125					
13. 48	42. 30	14. 39	·1125					
14. 0	41. 45	17. 31	·1131					
	***	19. 45	·1130					
15. 57	42. 45	20. 2	·1129					
17. 52	41. 40	20. 58	·1128					
18. 52	41. 50	21. 30	·1128					
19. 7	42. 15	21. 57	·1127					
19. 24	41. 35	22. 24	·1128					
21. 12	40. 35	22. 55	·1126					
21. 37	40. 40	23. 56	·1127					
21. 48	40. 15	23. 59	·1127					
22. 36	42. 50							
23. 18	43. 35							
23. 32	44. 50							
23. 59	45. 5							
Dec. 23		Dec. 23		Dec. 23		Dec. 23		
0. 0	20. 45. 5	0. 0	·1127		(†)	0. 0	40 ·7	42 ·4
0. 49	44. 30	0. 35	·1128	1. 0	·04403	1. 0	42 ·2	44 ·0
1. 41	45. 50	0. 51	·1127	1. 30	·04310	3. 0	45 ·8	46 ·5
2. 22	44. 50	1. 38	·1129	4. 28	·03645	6. 0	48 ·9	50 ·2
2. 36	45. 10	2. 2	·1126	5. 31	·03463	Max.	51 ·3	52 ·2
3. 2	44. 0	2. 36	·1128	7. 4	·03433	9. 0	50 ·2	52 ·0
3. 38	43. 15	2. 49	·1123	7. 45	·03425	12. 0	50 ·9	52 ·0
4. 24	44. 0	3. 8	·1126	9. 55	·03345	Min.	47 ·3	47 ·2
4. 52	43. 10	3. 35	·1124	13. 42	·03280	21. 5	48 ·0	50 ·0
5. 6	41. 50	3. 48	·1125	15. 43	·03300	22. 0	48 ·0	50 ·0
5. 17	41. 45	5. 9	·1112	17. 1	·03317	23. 0	48 ·3	50 ·1
5. 28	43. 20	5. 41	·1113	23. 2	·03520			
5. 38	42. 35	5. 53	·1110	23. 59	·03481			
5. 56	43. 20	6. 8	·1109					
6. 3	42. 10	6. 23	·1114					
6. 28	46. 25	6. 53	·1104					
6. 35	45. 55	7. 18	·1099					
6. 42	46. 55	7. 31	·1104					
7. 0	44. 30	7. 53	·1099					
7. 8	45. 5	8. 22	·1107					
7. 21	43. 0	8. 48	·1103					
7. 33	44. 25	9. 5	·1106					
7. 45	44. 10	9. 15	·1111					
7. 58	41. 30	9. 27	·1110					
8. 11	40. 35	9. 43	·1115					
8. 18	41. 30	9. 53	·1116					
9. 1	39. 5	10. 2	·1113					
9. 23	39. 25	10. 12	·1117					
9. 39	38. 15	10. 24	·1108					
9. 45	39. 10	10. 32	·1110					
10. 7	33. 10	10. 52	·1103					
10. 21	33. 10	11. 6	·1103					
10. 33	34. 50	11. 27	·1103					
10. 47	34. 30	11. 38	·1107					
11. 7	32. 25	11. 52	·1107					
11. 16	34. 45	12. 7	·1114					
11. 26	34. 50	12. 15	·1110					
11. 43	36. 35	12. 22	·1112					
11. 50	36. 5	12. 43	·1107					
12. 7	36. 0	13. 37	·1114					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 23		Dec. 23						
h m	° ′ ″	h m		h m		h m	°	°
12. 14	20. 34. 30	14. 17	·1110					
12. 22	35. 30	14. 28	·1111					
12. 31	35. 5	14. 49	·1110					
13. 15	40. 25	15. 21:	·1111					
13. 34	40. 45	15. 39	·1128					
14. 19	39. 5	15. 52	·1129					
14. 31	40. 10	16. 12	·1126					
14. 54	39. 20	16. 32	·1126					
15. 27	40. 45	17. 26	·1113					
15. 53	38. 30	17. 39	·1112					
16. 4	39. 25	17. 44	·1109					
16. 23	37. 55	18. 15	·1124					
16. 52	38. 25	18. 42	·1120					
17. 2	39. 20	19. 0	·1120					
17. 16	39. 30	19. 18	·1123					
17. 28	38. 45	19. 30	·1122					
17. 37	40. 10	19. 56	·1122					
17. 44	41. 45	20. 17	·1118					
17. 52	40. 5	20. 26	·1121					
18. 1	41. 25	21. 7	·1113					
18. 18	40. 5	21. 11	·1117					
19. 10	44. 35	21. 32	·1112					
19. 30	43. 15	21. 51	·1110					
20. 7	43. 25	22. 29	·1108					
20. 16	42. 30	22. 38	·1106					
20. 29	42. 45	23. 8	·1104					
20. 44	40. 55	23. 18	·1106					
20. 50	41. 35	23. 44	·1104					
21. 3	40. 30		(†)					
21. 30	42. 15							
21. 52	42. 0							
22. 18	42. 45							
22. 29	44. 10							
22. 37	42. 25							
22. 42	44. 0							
22. 50	43. 10							
22. 58	43. 55							
23. 3	43. 10							
23. 22	45. 45							
23. 31	45. 30							
23. 59	48. 10							
Dec. 24		Dec. 24		Dec. 24		Dec. 24		
0. 0	20. 48. 10		(†)	0. 0	·03481	0. 0	49 ·0	51 ·0
0. 11	47. 20	0. 15	·1104	2. 42	·03318	1. 0	50 ·0	51 ·8
0. 41	48. 15	0. 24	·1108	3. 0	·03325	3. 0	51 ·8	53 ·6
1. 1	46. 5	0. 57	·1095	6. 7:	·03220	Max.	54 ·1	54 ·9
1. 40	48. 55	1. 37	·1097	10. 43	·03290	9. 0	51 ·4	53 ·1
2. 2	47. 30	2. 15:	·1100	22. 40	·03630	Min.	48 ·0	47 ·8
2. 17	48. 40	2. 29	·1096	23. 59	·03650	22. 50	48 ·4	52 ·0
2. 32	47. 30	3. 17	·1102					
2. 47	47. 30	3. 26	·1101					
3. 10	45. 40	3. 55	·1108					
3. 53	43. 5	4. 0	·1106					
4. 7	43. 5	4. 23	·1110					
4. 37	41. 25	5. 20	·1110					
5. 2	41. 0	6. 17	·1114					
5. 32	39. 20	8. 8	·1112					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 24		Dec. 24						
h m	° ′ ″	h m		h m		h m	°	°
5. 56	20. 40. 10	9. 30	·1111					
6. 14	39. 40	9. 47	·1114					
7. 6	40. 25	10. 1	·1112					
8. 10	40. 5	10. 57	·1114					
9. 30	40. 5	11. 8	·1113					
10. 0	38. 50	15. 39	·1120					
11. 53	41. 0	16. 23	·1122					
14. 53	42. 45	17. 30	·1121					
16. 30	41. 35	17. 54	·1123					
17. 14	42. 30	18. 28	·1120					
17. 51	41. 25	19. 29	·1120					
20. 26	41. 15	20. 11	·1122					
21. 23	40. 5	22. 13	·1114					
22. 24	41. 0	22. 45	·1113					
23. 59	43. 25	23. 24	·1115					
		23. 59	·1113					
Dec. 25		Dec. 25		Dec. 25		Dec. 25		
0. 0	20. 43. 25	0. 0	·1113	0. 0	·03650	Max.	50 ·0	51 ·8
0. 26	43. 35	1. 8	·1116	2. 15	·03609	8. 5	48 ·5	51 ·8
1. 0	43. 45	1. 58	·1118	6. 20:	·03460	Min.	46 ·4	46 ·2
2. 20	43. 0	2. 10	·1117	8. 43	·03458	21. 0	47 ·3	49 ·0
3. 32	42. 35	3. 4	·1118	9. 8	·03490			
5. 8	41. 5	3. 52	·1117	12. 38	·03624			
7. 1	41. 0	6. 39	·1121	17. 20:	·03850			
8. 56	40. 10	7. 39	·1120	23. 59	·03781			
11. 1	40. 10	8. 25	·1119					
14. 58	42. 5	10. 2	·1120					
17. 9	41. 20	11. 48	·1122					
17. 17	42. 0	13. 26	·1124					
17. 27	41. 15	17. 6	·1124					
19. 23	41. 10	17. 22	·1129					
19. 52	41. 35	17. 46	·1128					
21. 1	40. 20	18. 23	·1129					
21. 26	41. 5	18. 38	·1132					
21. 58	40. 25	19. 41	·1130					
22. 28	40. 35	19. 53	·1130					
23. 13	42. 40	20. 19	·1129					
23. 43	42. 45	21. 14	·1127					
23. 59	43. 35	21. 53	·1123					
		22. 27	·1120					
		22. 44	·1124					
		22. 58	·1123					
		23. 12	·1115					
		23. 24	·1121					
		23. 45	·1120					
		23. 59	·1120					
Dec. 26		Dec. 26		Dec. 26		Dec. 26		
0. 0	20. 43. 35	0. 0	·1120	0. 0	·03781	1. 0	49 ·8	51 ·5
0. 49	44. 15	0. 22	·1119	1. 54	·03604	3. 0	52 ·0	53 ·7
1. 10	45. 30		(†)	4. 8	·03305	Max.	54 ·1	55 ·0
1. 45	44. 45	1. 0	·1115	5. 39	·03199	9. 0	53 ·5	54 ·3
2. 19	47. 5	1. 7	·1112	7. 6	·03197	Min.	49 ·6	49 ·4
3. 16	45. 30	1. 26	·1109	9. 58	·03177	22. 43	51 ·0	52 ·4
4. 12	45. 30	1. 58	·1110	16. 11	·03300			
4. 33	44. 20	2. 32	·1108	17. 58	·03282			
4. 58	45. 5	2. 57	·1112	23. 59	·03344			
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 26		Dec. 26						
h m	° ′ ″	h m		h m		h m	°	°
6. 21	20. 43. 40	3. 45	·1112					
7. 0	38. 50	4. 7	·1108					
7. 32:	42. 0	5. 22	·1108					
7. 57	41. 20	5. 55	·1109					
8. 13	41. 35	6. 30	·1105					
9. 55	39. 50	6. 46	·1112					
12. 15	40. 55	7. 57	·1114					
12. 50	40. 15	8. 11	·1113					
13. 15	41. 0	11. 10	·1115					
13. 58	35. 35	12. 2	·1115					
14. 43	38. 30	12. 13	·1114					
14. 48	37. 20	12. 28	·1113					
14. 58	38. 20	12. 39	·1112					
15. 7	37. 30	13. 8	·1117					
15. 15	38. 25	13. 39	·1118					
15. 31	37. 0	14. 10	·1111					
15. 56	40. 55	14. 32	·1112					
16. 13	39. 30	14. 50	·1110					
16. 29	42. 55	15. 13	·1114					
16. 36	42. 30	15. 24	·1112					
17. 18	51. 15	15. 32	·1118					
17. 32	48. 40	15. 54	·1118					
17. 48	50. 0	16. 15	·1111					
17. 57	49. 40	16. 43	·1119					
18. 3	50. 20	16. 56	·1116					
18. 13	49. 15	17. 12	·1121					
18. 33	47. 35	17. 34	·1115					
19. 0	43. 5	17. 46	·1119					
19. 13	43. 25	17. 58	·1116					
19. 30	42. 20	18. 27	·1127					
19. 32	43. 50	18. 53	·1126					
19. 45	41. 30	19. 26	·1113					
19. 55	43. 20	19. 54	·1112					
20. 13	42. 25	20. 0	·1115					
	***	20. 9	·1110					
20 39	44. 35	20. 18	·1116					
21. 18	43. 55	20. 29	·1112					
21. 39	46. 50	20. 54	·1123					
21. 55	47. 15	21. 52	·1098					
22. 26	43. 30	22. 8	·1097					
22. 38	43. 0	22. 25	·1101					
22. 43	44. 5	22. 37	·1099					
23. 1	44. 15		(†)					
23. 16	50. 25	23. 26	·1105					
23. 42	48. 15	23. 43	·1104					
23. 45	49. 5	23. 52	·1105					
23. 50	48. 50	23. 59	·1103					
23. 59	48. 50							
Dec. 27		Dec. 27		Dec. 27		Dec. 27		
0. 0	20. 48. 50	0. 0	·1103	0. 0	·03394	1. 0	50 ·5	52 ·0
0. 6	50. 0	0. 15	·1109	1. 43	·03480	Max.	50 ·5	52 ·0
0. 13	48. 55		(†)	5. 0:	·03626	9. 0	46 ·2	47 ·0
0. 28	52. 35	1. 2	·1099	9. 24	·04069	18. 50	41 ·9	43 ·2
0. 36	49. 55	1. 59	·1108	10. 21	·04120	Min.	40 ·3	39 ·8
0. 43	49. 35	2. 16	·1114	11. 36:	·04140	21. 0	41 ·2	43 ·0
0. 46	52. 15	2. 29	·1109	13. 30	·04293			
0. 52	51. 50	3. 5	·1112	14. 30	·04325			
					(†)			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 27. The photographic spot of light for the Vertical Force Magnet was off the sheet from $14^{h.}\ 30^{m.}$ till $1^{h.}\ 39^{m.}$ on December 28.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 27		Dec. 27		Dec. 27				
h m	° ′ ″	h m		h m		h m	°	°
1. 2	20. 59. 40	4. 45	·1112	21. 0	·04474*			
1. 40	45. 55	4. 56	·1116					
1. 56	43. 45	5. 7	·1113					
2. 13	47. 30	5. 13	·1117					
2. 33	44. 25	5. 28	·1110					
2. 40	45. 45	5. 44	·1108					
2. 49	44. 5	5. 57	·1102					
3. 20	44. 0	6. 24	·1112					
3. 28	44. 40	6. 32	·1111					
3. 38	43. 35	6. 45	·1115					
4. 43	42. 55	7. 0	·1113					
4. 52	43. 55	7. 11	·1115					
5. 0	43. 20	7. 39	·1113					
5. 12	45. 10	7. 47	·1114					
5. 22	45. 10	8. 16	·1112					
5. 38	46. 45	8. 39	·1107					
5. 58	42. 45	9. 8	·1114					
6. 27	43. 10	9. 26	·1111					
6. 38	42. 30	9. 37	·1116					
7. 23	42. 20	9. 52	·1113					
7. 56	40. 25	10. 8	·1117					
8. 13	41. 0	10. 22	·1115					
8. 37	38. 35	10. 58	·1118					
9. 8	41. 25	12. 4	·1119					
9. 53	39. 40	12. 16	·1116					
10. 54	40. 20	12. 52	·1114					
11. 10	41. 5	13. 10	·1116					
13. 12	41. 35	13. 22	·1113					
13. 28	40. 20	13. 56	·1114					
13. 31	41. 35	14. 8	·1112					
14. 33	42. 35	14. 38	·1116					
15. 7	47. 20	14. 59	·1115					
15. 31	47. 45	15. 27	·1126					
15. 39	45. 10	15. 39	·1124					
15. 56	43. 30	15. 53	·1128					
16. 0	42. 10	16. 0	·1128					
16. 8	41. 30	16. 27	·1134					
16. 25	43. 25	16. 44	·1128					
16. 47	41. 35	17. 8	·1127					
17. 3	44. 5	17. 21	·1128					
17. 22	42. 15	17. 40	·1120					
17. 47	45. 5	17. 52	·1124					
18. 2	46. 0	18. 3	·1125					
18. 12	48. 10	18. 13	·1123					
18. 21	46. 25	18. 38	·1129					
19. 2	44. 20	18. 47	·1126					
19. 18	45. 50	19. 22	·1127					
19. 41	45. 10	19. 38	·1126					
19. 52	46. 0	19. 59	·1129					
20. 0	44. 40	20. 39	·1119					
20. 20	43. 35	20. 51	·1123					
20. 32	41. 30	21. 23	·1123					
20. 52	40. 15	21. 42	·1118					
20. 59	42. 10	21. 51	·1123					
21. 7	40. 25	22. 6	·1122					
21. 22	40. 25	22. 14	·1126					
21. 25	42. 0	23. 8	·1118					
21. 43	41. 5	23. 28	·1106					
Dec. 27		Dec. 27						
h m	° ′ ″	h m		h m		h m	°	°
21. 47	20. 39. 40	23. 54	·1107					
22. 0	41. 30	23. 59	·1109					
22. 9	40. 0							
22. 18	43. 20							
23. 0	43. 0							
23. 29	43. 30							
23. 50	47. 15							
23. 59	46. 55							
Dec. 28		Dec. 28		Dec. 28		Dec. 28		
0. 0	20. 46. 55	0. 0	·1109		(†)	1. 0	44·0	46·0
0. 7	45. 55	0. 8	·1112	1. 0	·04331*	3. 0	45·2	47·0
0. 29	47. 20		(†)	1. 39	·04264	Max.	48·8	50·0
0. 39	46. 30	0. 57	·1113	2. 56	·04160	9. 0	48·3	50·0
0. 56	47. 5	1. 23	·1114	3. 23	·04138	Min.	48·0	48·2
1. 23	45. 40	1. 35	·1118	6. 52:	·03720	18. 0	48·5	50·0
1. 30	47. 10	1. 54	·1113	10. 0	·03494	21. 0	49·0	50·5
1. 52	45. 40	2. 9	·1114	11. 30	·03397			
2. 15	46. 10	2. 49	·1100	12. 51	·03354			
2. 30	45. 10	3. 0	·1100	18. 1	·03365			
2. 36	44. 5	3. 23	·1116	22. 7	·03327			
2. 40	44. 30	3. 53	·1117	23. 59	·03257			
3. 6	37. 30	4. 22	·1115					
3. 27	42. 10	4. 41	·1119					
3. 44	43. 25	5. 30	·1118					
3. 52	44. 55	5. 43	·1121					
4. 7	43. 30	6. 2	·1113					
4. 16	44. 5	6. 23	·1114					
4. 58	41. 35	6. 38	·1111					
5. 30	42. 25	7. 45	·1120					
5. 39	41. 10	7. 57	·1117					
5. 49	41. 30	8. 17	·1120					
6. 47	38. 45	8. 30	·1118					
7. 52	40. 35	8. 39	·1119					
8. 28	39. 30	8. 53	·1118					
9. 4	39. 15	9. 9	·1121					
9. 15	37. 50	9. 26	·1118					
9. 24	38. 45	9. 47	·1118					
10. 7	38. 20	10. 13	·1121					
10. 30	35. 5	10. 40	·1116					
10. 50	35. 20	11. 8	·1119					
11. 0	34. 30	11. 40	·1116					
11. 13	35. 5	11. 47	·1120					
11. 28	32. 30	11. 56	·1118					
12. 3	36. 20	12. 20	·1125					
12. 16	38. 55	12. 43	·1122					
13. 0	36. 15	13. 44	·1122					
14. 43	41. 25	14. 27	·1123					
15. 3	41. 5	14. 37	·1125					
15. 10	42. 40	14. 43	·1123					
15. 18	41. 45	15. 22	·1123					
15. 38	43. 35	15. 38	·1121					
16. 13	42. 35	16. 4	·1120					
16. 17	43. 5	16. 11	·1123					
16. 30	41. 0	16. 23	·1119					
16. 46	42. 5	16. 32	·1123					
17. 18	40. 15	16. 40	·1124					
17. 58	42. 10	16. 46	·1121					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 28		Dec. 28						
h m	° ′ ″	h m		h m		h m	°	°
18. 11	20. 41. 30	17. 13	·1128					
18. 48	42. 55	17. 45	·1125					
19. 2	42. 10	18. 23	·1131					
19. 12	42. 55	18. 42	·1131					
19. 53	42. 30	19. 2	·1125					
20. 7	44. 20	19. 17	·1125					
20. 23	44. 0	19. 33	·1121					
21. 7	41. 5	20. 8	·1120					
21. 23	41. 20	20. 26	·1123					
21. 32	40. 0	20. 32	·1120					
21. 37	40. 50	20. 39	·1122					
21. 48	40. 30	20. 52	·1116					
22. 4	43. 25	21. 7	·1115					
22. 18	43. 5	21. 24	·1119					
22. 40	41. 15	21. 32	·1118					
23. 50	42. 10	21. 43	·1122					
23. 59	43. 5	21. 51	·1119					
		22. 12	·1119					
		22. 43	·1113					
		23. 7	·1114					
		23. 30	·1112					
		23. 59	·1115					
Dec. 29		Dec. 29		Dec. 29		Dec. 29		
0. 0	20. 43. 5	0. 0	·1115	0. 0	·03257	1. 0	51 ·8	53 ·0
0. 23	45. 5	0. 38	·1113	3. 48	{·03235	3. 0	52 ·9	54 ·3
0. 30	44. 25	0. 54	·1104		{·03360	Max.	54 ·0	55 ·0
0. 37	45. 50	1. 30	·1094	6. 22	·03233	9. 0	54 ·0	55 ·0
0. 55	44. 10	1. 57	·1105	7. 59	·03244	18. 0	49 ·4	51 ·1
1. 13	45. 45	2. 8	·1104	9. 45	·03240	Min.	48 ·1	48 ·1
1. 44	45. 10	2. 15	·1106	11. 0	·03217	21. 0	49 ·0	50 ·8
2. 0	46. 35	2. 45	·1098	14. 50	·03366	22. 0	49 ·0	51 ·0
2. 27	45. 35	3. 11	·1101	22. 23:	·03720	23. 0	49 ·4	51 ·2
2. 37	46. 0	3. 23	·1099	23. 59	·03665			
3. 2	44. 25	3. 55	·1103					
3. 10	45. 10	4. 8	·1102					
3. 23	43. 35	4. 49	·1110					
3. 49	42. 15	5. 25	·1105					
4. 23	43. 15	6. 0	·1112					
4. 36	41. 55	6. 42	·1104					
4. 46	43. 40	7. 12	·1100					
4. 57	42. 55	7. 39	·1089					
5. 13	45. 10	7. 53	·1088					
5. 45	42. 20	8. 0	·1096					
6. 0	41. 35	8. 15	·1103					
6. 22	42. 15	8. 30	·1099					
6. 53	39. 10	8. 51	·1106					
7. 11	40. 55	9. 0	·1104					
7. 30	35. 20	9. 13	·1109					
7. 46	35. 25	9. 35	·1103					
7. 56	33. 15	9. 40	·1106					
8. 23	39. 10	9. 54	·1098					
8. 41	37. 15	10. 18	·1122					
8. 55	37. 35	10. 30	·1126					
9. 9	34. 30	11. 0	·1099					
9. 16	36. 25	11. 23	·1109					
9. 29	36. 30	12. 10	·1109					
9. 37	34. 35	12. 53	·1112					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 29		Dec. 29						
h m	° ′ ″	h m		h m		h m	°	°
9. 46	20. 39. 20	13. 2	·1116					
10. 15	38. 35	13. 10	·1115					
10. 22	33. 50	13. 24	·1117					
10. 31	33. 25	13. 38	·1114					
10. 48	35. 5	13. 51	·1117					
11. 2	33. 0	14. 2	·1116					
11. 9	33. 25	14. 27	·1121					
11. 16	32. 50	14. 43	·1122					
12. 16	39. 15	15. 7	·1116					
12. 37	36. 35	15. 17	·1117					
13. 7	40. 50	15. 52	·1114					
13. 26	40. 35	16. 31	·1115					
13. 30	41. 5	16. 57	·1119					
13. 46	40. 0	17. 5	·1123					
14. 8	44. 30	17. 13	·1119					
14. 27	42. 55	17. 35	·1117					
14. 36	43. 25	18. 0	·1118					
14. 53	40. 30	18. 10	·1121					
15. 8	41. 50	18. 38	·1122					
	***	19. 8	·1114					
16. 13	41. 10	19. 38	·1117					
16. 30	42. 5	19. 51	·1115					
16. 42	41. 30	20. 14	·1115					
16. 49	42. 45	20. 32	·1109					
17. 6	40. 30	20. 46	·1110					
17. 13	42. 5	21. 22	·1118					
17. 19	40. 45	22. 14	·1113					
18. 1	42. 45	22. 40	·1112					
18. 12	42. 0		(†)					
18. 41	43. 25							
18. 49	42. 35							
19. 0	43. 25							
19. 20	42. 40							
	***							
20. 24	44. 0							
21. 2	41. 35							
21. 23	43. 10							
21. 32	42. 5							
21. 42	43. 50							
21. 48	43. 5							
21. 57	43. 35							
	(†)							
22. 21	41. 0							
22. 30	41. 30							
22. 39	42. 40							
22. 43	41. 25							
22. 46	42. 50							
22. 55	41. 25							
23. 0	42. 55							
23. 34	43. 0							
23. 45	43. 40							
23. 59	43. 10							
Dec. 30		Dec. 30		Dec. 30		Dec. 30		
0. 0	20. 43. 10		(†)	0. 0	·03665	0. 0	49 ·6	51 ·6
0. 57	43. 35	0. 32	·1115	2. 0	·03606	1. 0	50 ·0	52 ·0
1. 12	42. 50	0. 43	·1117	2. 43	·03598	2. 0	50 ·5	52 ·2
2. 28	43. 30	1. 8	·1114	6. 24:	·03458	3. 0	50 ·9	52 ·4

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 30. The photographic spot of light for the Vertical Force Magnet was off the sheet from $19^h.\ 45^m.$ till $2^h.\ 6^m.$ on December 31, and again after $14^h.\ 59^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 30		Dec. 30		Dec. 30		Dec. 30		
h m	° ′ ″	h m		h m		h m	°	°
4. 48	20. 41. 5	2. 37	·1117	10. 17	·03547	6. 0	51 ·0	52 ·4
5. 50	42. 0	2. 45	·1120	11. 57	·03522	Max.	51 ·7	52 ·4
6. 28	41. 15	3. 15	·1118	12. 36	·03537	9. 0	50 ·0	51 ·7
7. 12	41. 35	3. 30	·1120	12. 53	·03602	12. 0	49 ·8	51 ·6
7. 43	41. 5	3. 56	·1119	14. 7	·03703	Min.	42 ·2	41 ·7
8. 42	40. 50	4. 21	·1122	18. 13	·04298	21. 0	43 ·0	45 ·0
9. 1	40. 5	5. 7	·1120	19. 45	·04323	22. 0	43 ·0	44 ·8
9. 23	41. 0	6. 55	·1119		(†)	23. 0	43 ·4	45 ·0
9. 38	40. 5	7. 7	·1120	21. 0	·04389*			
10. 27	39. 25	7. 30	·1118					
11. 13	40. 0	8. 29	·1118					
11. 58	39. 40	8. 47	·1117					
12 7	40. 30	9. 24	·1116					
13. 2	41. 25	9. 52	·1112					
13. 41	42. 45	10. 6	·1115					
14. 28	41. 55	10. 17	·1115					
15. 23	42. 45	11. 8	·1117					
15. 59	42. 5	11. 30	·1120					
16. 18	42. 55	12. 43	·1119					
16. 37	41. 20	13. 25	·1119					
17. 16	42. 0	13. 36	·1121					
17. 27	42. 30	13. 48	·1121					
17. 53	41. 10	14. 4	·1124					
18. 13	42. 20	15. 23	·1124					
18. 53	42. 5	16. 23	·1127					
19. 18	43. 40	17. 8	·1125					
19. 40	42. 0	17. 23	·1128					
20. 0	41. 15	18. 4	·1129					
20. 5	41. 55	18. 23	·1126					
20. 18	40. 25	18. 44	·1131					
20. 58	40. 15	19. 21	·1130					
21. 13	38. 50	20. 1	·1127					
21. 26	39. 45	20. 51	·1128					
21. 37	38. 55	21. 13	·1124					
21. 45	39. 50	21. 56	·1122					
21. 58	39. 5	22. 9	·1124					
22. 7	40. 5	22. 43	·1121					
22. 43	41. 5	22. 57	·1123					
22. 52	43. 20	23. 28	·1119					
22. 58	42. 30		(†)					
23. 6	43. 40							
23. 18	42. 10							
23. 41	42. 35							
23. 59	41. 10							
Dec. 31		Dec. 31		Dec. 31		Dec. 31		
0. 0	20. 41. 10	0. 0	·1118		(†)	0. 0	43 ·5	45 ·2
0. 6	39. 10	0. 38	·1122	1. 0	·04383*	1. 0	44 ·0	45 ·9
1. 8	40. 10	1. 0	·1119	2. 6	·04320	3. 0	45 ·2	46 ·8
1. 20	43. 25		***	2. 58	·04304	Max.	46 ·2	46 ·8
1. 28	42. 0	1. 36	·1126	6. 1	·04195	9. 0	44 ·8	46 ·1
1. 42	41. 20	3. 9	·1129	9. 38	·04243	Min.	41 ·0	40 ·5
2. 16	44. 25	4. 0	·1127	10. 26	·04240	21. 0	41 ·9	43 ·7
2. 29	43. 0	4. 13	·1120	10. 47	·04213			
2. 34	43. 30	4. 39	·1124	11. 54	·04250			
2. 51	42. 30	4. 49	·1122	13. 32	·04282			
2. 57	43. 20	5. 31	·1129	14. 0	·04258			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 31		Dec. 31		Dec. 31				
h m	° ′ ″	h m		h m		h m	°	°
3. 19	20. 42. 20	6. 0	·1129	14. 59	·04313			
3. 30	42. 55	6. 28	·1124		(†)			
3. 43	41. 50	6. 50	·1126	21. 0	·04443*			
4. 9	42. 5	7. 13	·1121					
4. 22	40. 15	7. 42	·1122					
4. 43	40. 30	8. 8	·1116					
4. 58	38. 50	8. 15	·1119					
5. 49	41. 25	8. 35	·1114					
6. 20	41. 20	8. 46	·1122					
6. 32	43. 15	9. 12	·1115					
6. 48	42. 35	9. 47	·1121					
7. 6	41. 0	10. 7	·1122					
7. 17	40. 35	10. 24	·1150					
7. 23	41. 30	10. 45	·1125					
7. 36	41. 10	10. 59	·1135					
7. 43	40. 0	11. 28	·1122					
8. 8	38. 55	11. 53	·1127					
8. 14	39. 25	12. 2	·1126					
8. 30	38. 30	12. 14	·1127					
8. 40	37. 0	12. 39	·1122					
8. 47	37. 30	13. 9	·1118					
8. 55	36. 10	13. 32	·1154					
9. 12	37. 25	14. 13	·1124					
9. 18	36. 10	14. 25	·1122					
9. 29	38. 5	15. 2	·1129					
9. 42	38. 30	15. 13	·1126					
9. 57	37. 0	15. 53	·1132					
10. 8	38. 10	16. 12	·1129					
10. 20	35. 45	16. 30	·1132					
10. 38	35. 55	17. 30	·1124					
10. 58	38. 0	18. 1	·1125					
11. 8	39. 10		(†)					
11. 31	37. 0	19. 42	·1131					
12. 13	40. 10	20. 22	·1113					
12. 27	40. 20	20. 38	·1117					
12. 54	36. 0	20. 57	·1126					
13. 12	39. 10	21. 7	·1124					
13. 23	38. 40	21. 15	·1130					
13. 37	35. 20	21. 28	·1124					
13. 43	37. 40	21. 40	·1130					
13. 56	37. 5	21. 55	·1127					
14. 12	33. 15		(†)					
14. 19	33. 10							
14. 30	37. 0							
14. 50	39. 35							
15. 10	38. 25							
	***							
15. 30	40. 20							
15. 56	40. 25							
16. 12	41. 40							
16. 21	41. 15							
16. 54	42. 55							
18. 13	43. 5							
18. 18	43. 55							
18. 42	42. 50							
19. 9	41. 30							
19. 22	42. 40							
19. 40	43. 10							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 31								
h m	° ′ ″	h m		h m		h m	°	°
19. 59	20. 46. 10							
20. 10	45. 40							
20. 28	46. 5							
20. 37	45. 0							
20. 47	45. 5							
20. 52	44. 10							
20. 54	45. 0							
21. 26	41. 5							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 31								
h m	° ′ ″	h m		h m		h m	°	°
21. 40	20. 41. 10							
22. 24	43. 10							
22. 50	47. 20							
23. 12	44. 50							
23. 27	44. 35							
23. 34	43. 5							
23. 47	44. 55							
23. 59	43. 40							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

TABLE showing the APPROXIMATE MEAN MONTHLY WESTERN DECLINATION, at the ROYAL OBSERVATORY, GREENWICH, in the Year 1863.

MONTH.	1863.
	° ′ ″
January	20. 50. 5
February	48. 32
March	48. 38
April	46. 45
May	45. 37
June	46. 13
July	46. 30
August	45. 39
September	45. 7
October	43. 36
November	42. 13
December	42. 0
Mean	20. 45. 55

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

OF THE

MAGNETIC DIP.

1863.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1863.

Day and Approximate Hour, 1863.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″	
January 13. 0	C 1	6 inches	68. 11. 52	N
19. 2	C 2	6 ,,	68. 10. 35	N
20. 2	C 3	6 ,,	68. 9. 35	N
27. 0	C 1	6 ,,	68. 9. 1	N
27. 1	C 2	6 ,,	68. 14. 24	N
29. 1	C 3	6 ,,	68. 4. 17	N
February 7. 1	D 1	3 ,,	68. 11. 30	N
7. 2	D 2	3 ,,	68. 5. 23	N
10. 1	C 1	6 ,,	68. 15. 58	N
13. 2	D 1	3 ,,	68. 27. 59	N
16. 2	D 2	3 ,,	68. 13. 36	N
18. 0	D 1	3 ,,	68. 21. 39	N
20. 22	D 1	3 ,,	68. 20. 11	G B A
22. 22	D 1	3 ,,	68. 24. 1	N
22. 23	D 1	3 ,,	68. 22. 23	N
23. 0	D 2	3 ,,	68. 6. 4	N
23. 1	D 1	3 ,,	68. 21. 7	G
23. 22	C 1	6 ,,	68. 22. 56	N
May 11. 0	B 1	9 ,,	68. 4. 29	G
14. 0	C 1	6 ,,	67. 56. 51	G
16. 2	C 1	6 ,,	68. 4. 16	N
18. 1	C 1	6 ,,	68. 3. 56	N
21. 22	C 1	6 ,,	68. 6. 43	G
22. 2	C 1	6 ,,	68. 2. 54	N
26. 23	C 1	6 ,,	68. 8. 44	N
29. 0	C 1	6 ,,	68. 6. 46	N
June 5. 2	C 1	6 ,,	68. 9. 21	N
18. 1	C 1	6 ,,	68. 1. 55	N
24. 2	C 4	6 ,,	68. 4. 26	N
24. 22	C 4	6 ,,	68. 3. 14	N
30. 0	C 4	6 ,,	67. 59. 19	N
July 0. 22	C 1	6 ,,	68. 8. 5	N
1. 0	C 2	6 ,,	68. 4. 30	N
1. 2	C 4	6 ,,	68. 0. 5	N
2. 0	C 4	6 ,,	67. 59. 7	N
2. 2	B 1	9 ,,	68. 10. 49	N
3. 23	C 4	6 ,,	67. 59. 2	N
4. 1	D 1	3 ,,	68. 18. 40	N
15. 2	C 4	6 ,,	67. 57. 53	N
25. 1	C 4	6 ,,	68. 5. 32	N
27. 0	C 4	6 ,,	68. 0. 28	N
July 27. 2	C 1	6 inches	68. 7. 22	N
28. 1	C 2	6 ,,	68. 2. 57	N
30. 22	B 1	9 ,,	68. 4. 43	N
31. 0	C 1	6 ,,	68. 8. 38	N
31. 2	D 1	3 ,,	68. 23. 41	N
August 11. 2	C 4	6 ,,	68. 1. 52	N
18. 1	C 2	6 ,,	68. 9. 58	N
25. 2	C 4	6 ,,	68. 2. 5	N
27. 22	B 2	9 ,,	68. 6. 57	N
28. 0	C 2	6 ,,	68. 2. 27	N
28. 2	D 2	3 ,,	68. 3. 18	N
31. 2	C 4	6 ,,	68. 2. 29	N
September 2. 0	C 4	6 ,,	68. 0. 47	N
12. 2	D 2	3 ,,	68. 7. 29	N
19. 1	D 2	3 ,,	68. 1. 39	N
25. 0	C 4	6 ,,	68. 1. 24	N
28. 2	C 4	6 ,,	68. 1. 52	N
28. 23	B 2	9 ,,	68. 8. 2	N
October 7. 21	B 4	9 ,,	67. 53. 32	N
8. 0	C 4	6 ,,	68. 4. 14	N
8. 1	D 4	3 ,,	68. 10. 30	N
10. 0	D 1	3 ,,	68. 10. 48	N
16. 23	D 1	3 ,,	68. 10. 33	N
17. 0	D 2	3 ,,	68. 4. 16	N
17. 2	D 4	3 ,,	68. 5. 18	N
23. 2	C 4	6 ,,	68. 2. 11	N
28. 0	B 1	9 ,,	68. 4. 53	N
30. 22	B 4	9 ,,	67. 52. 44	N
31. 1	D 2	3 ,,	68. 4. 0	N
31. 2	D 4	3 ,,	68. 6. 14	N
November 9. 0	C 1	6 ,,	68. 12. 20	N
9. 1	C 2	6 ,,	68. 9. 39	N
20. 1	C 4	6 ,,	68. 1. 24	N
27. 2	D 4	3 ,,	68. 1. 57	N
30. 2	D 4	3 ,,	68. 7. 2	N
December 12. 2	C 4	6 ,,	68. 4. 7	N
18. 1	D 4	3 ,,	68. 4. 10	N
18. 2	C 4	6 ,,	68. 0. 51	N
30. 1	C 1	6 ,,	68. 14. 26	N
30. 2	C 4	6 ,,	68. 0. 27	N

June 5, July 25, and September 2 were damp days.

October 8. A magnetic disturbance.

From February 24 to May 11 the Dip Apparatus was in the hands of Mr. Simms, for the application of fixed microscopes for the three lengths of 9, 6, and 3 inches.

Between July 31 and October 10 a new axle was applied to needle D 1.

The initials G B A, G, and N are those of the Astronomer-Royal, Mr. Glaisher, and Mr. W. C. Nash respectively.

MONTHLY MEANS of MAGNETIC DIPS, at the ROYAL OBSERVATORY, GREENWICH, with AIRY'S DIP APPARATUS, in the Year 1863.

Month, 1863.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	B 4, 9-inch Needle.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.	C 2, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January...	....	..	....	..	....	..	68. 10. 27	2	68. 12. 30	2
February..	....	..	....	..	....	..	68. 19. 27	2	....	..
March	....	..	....	..	....	..	....	..	....	..
April	....	..	....	..	....	..	....	..	....	..
May	68. 4. 29	1	....	..	....	..	68. 4. 19	7	....	..
June	....	..	....	..	....	..	68. 5. 38	2	....	..
July.....	68. 7. 46	2	....	..	....	..	68. 8. 2	3	68. 3. 44	2
August ...	....	..	68. 6. 57	1	....	..	....	..	68. 6. 13	2
September.	....	..	68. 8. 2	1	....	..	....	..	....	..
October ...	68. 4. 53	1	....	..	67. 53. 8	2	....	..	....	..
November .	....	..	....	..	....	..	68. 12. 20	1	68. 9. 39	1
December .	....	..	....	..	....	..	68. 14. 26	1	....	..
Means..	68. 6. 14	4	....	..	....	..	68. 8. 27	18	68. 7. 47	7

Month, 1863.	C 3, 6-inch Needle, loaded.	Number of Observations.	C 4, 6-inch Needle.	Number of Observations.	D 1, 3-inch Needle.	Number of Observations.	D 2, 3-inch Needle.	Number of Observations.	D 4, 3-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January...	68. 6. 56	2	....	..	....	..	....	..	....	..
February..	....	..	....	..	68. 21. 16	7	68. 8. 21	3	....	..
March	....	..	....	..	....	..	....	..	....	..
April	....	..	....	..	....	..	....	..	....	..
May	....	..	....	..	....	..	....	..	....	..
June	....	..	68. 2. 20	3	....	..	....	..	....	..
July.....	....	..	68. 0. 21	6	68. 21. 10	2	....	..	....	..
August ...	....	..	68. 2. 9	3	....	..	68. 3. 18	1	....	..
September.	....	..	68. 1. 21	3	....	..	68. 4. 34	2	....	..
October ...	....	..	68. 3. 13	2	68. 10. 41	2	68. 4. 8	2	68. 7. 21	3
November .	....	..	68. 1. 24	1	....	..	....	..	68. 4. 30	2
December .	....	..	68. 1. 48	3	....	..	....	..	68. 4. 10	1
Means.	....	..	68. 1. 34	21	....	..	68. 5. 43	8	....	..

For this table the monthly means have been formed without reference to the hour at which the observation was made on each day, as in preceding years no certain difference was found between observations taken at 21^h and at 3^h.

In combining the monthly results, to form the annual means, weights have been given proportional to the number of observations. The mean for C 1 applies to the month September nearly.

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1863.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, made with the KEW UNIFILAR INSTRUMENT.

Month and Day. 1863.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft		° ′ ″	s		°	
January 20	Lateral	1·0	51·7	15. 36. 5	4·816	100	49·4	N
	Lateral	1·3		7. 2. 14	4·813	100	46·8	
February 3	Lateral	1·0	52·0	15. 34. 28	4·816	100	50·9	N
	Lateral	1·3		6. 59. 3	4·823	100	61·4	
February 17	Lateral	1·0	48·3	15. 7. 18	4·891	100	49·2	N
	Lateral	1·3		6. 49. 55	4·888	100	55·2	
March 3	Lateral	1·0	61·9	15. 4. 42	4·901	100	68·4	N
	Lateral	1·3		6. 48. 37	4·906	100	64·3	
March 17	Lateral	1·0	49·2	15. 4. 54	4·910	100	54·1	N
	Lateral	1·3		6. 48. 45	4·923	100	54·5	
April 1	Lateral	1·0	55·2	15. 5. 56	4·909	100	63·6	N
	Lateral	1·3		6. 48. 45	4·908	100	61·5	
April 14	Lateral	1·0	59·1	15. 2. 53	4·909	100	60·2	N
	Lateral	1·3		6. 47. 34	4·907	100	63·1	
April 28	Lateral	1·0	54·6	15. 3. 40	4·909	100	57·3	N
	Lateral	1·3		6. 46. 43	4·915	100	64·6	
May 12	Lateral	1·0	56·5	15. 2. 23	4·914	100	58·4	N
	Lateral	1·3		6. 47. 15	4·911	100	59·4	
May 26	Lateral	1·0	57·8	15. 0. 35	4·907	100	60·9	N
	Lateral	1·3		6. 46. 19	4·913	100	63·4	
June 9	Lateral	1·0	64·1	14. 59. 32	4·918	100	66·5	N
	Lateral	1·3		6. 46. 16	4·915	100	65·8	
June 30	Lateral	1·0	66·3	14. 56. 44	4·920	100	69·0	N
	Lateral	1·3		6. 44. 46	4·920	100	70·6	
July 7	Lateral	1·0	78·6	14. 53. 7	4·924	100	82·4	N
	Lateral	1·3		6. 43. 23	4·920	100	83·9	
July 21	Lateral	1·0	63·3	14. 55. 5	4·923	100	64·0	N
	Lateral	1·3		6. 43. 45	4·932	100	67·1	

The lengths of 1 foot and 1·3 foot answer to 304·794 and 396·232 millimètres respectively.
The initial N is that of Mr. W. C. Nash.
In the following calculations, every observation is reduced to the temperature 35°.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, observed with the KEW UNIFILAR INSTRUMENT—*concluded*.

Month and Day. 1863.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft.	°	′ ″	s		°	
August 4	Lateral	1·0	73·9	14. 50. 53	4·932	100	76·5	N
	Lateral	1·3		6. 42. 18	4·937	100	78·0	
August 18	Lateral	1·0	62·9	14. 51. 46	4·944	100	64·9	N
	Lateral	1·3		6. 42. 42	4·944	100	65·5	
September 1	Lateral	1·0	66·8	14. 47. 14	4·933	100	70·9	N
	Lateral	1·3		6. 40. 58	4·940	100	72·7	
September 15	Lateral	1·0	61·9	14. 46. 48	4·943	100	64·7	N
	Lateral	1·3		6. 40. 52	4·942	100	65·1	
September 29	Lateral	1·0	60·6	14. 46. 44	4·939	100	63·4	N
	Lateral	1·3		6. 40. 48	4·946	100	65·8	
October 14	Lateral	1·0	63·6	14. 46. 59	4·945	100	66·0	N
	Lateral	1·3		6. 40. 34	4·947	100	67·3	
October 27	Lateral	1·0	49·2	14. 46. 20	4·937	100	50·9	N
	Lateral	1·3		6. 40. 28	4·947	100	52·8	
November 27	Lateral	1·0	51·5	14. 43. 16	4·944	100	52·2	N
	Lateral	1·3		6. 38. 54	4·943	100	56·5	
December 22	Lateral	1·0	46·3	14. 44. 14	4·952	100	54·4	N
	Lateral	1·3		6. 39. 19	4·952	100	50·7	

The lengths of 1 foot and 1·3 foot answer to 304·794 and 396·232 millimètres respectively.
The initial N is that of Mr. W. C. Nash.
In the following calculations, every observation is reduced to the temperature 35°.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1863.	In English Measure. Apparent Value of A.	Apparent Value of A'.	Apparent Value of P.	Mean Value of P.	Log. $\frac{1}{2}$ A = Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. m X.	Value of X.	Value of m.	Value of X in French Measure.
January 20	+0·13483	0·07966	+0·00363	+0·00752	9·12686	4·816	0·29566	3·841	0·5144	1·771
February 3	+0·13461	0·07925	+0·01228		9·12537	4·820	0·29548	3·846	0·5134	1·774
17	+0·13071	0·07742	−0·00225		9·11736	4·890	0·28268	3·825	0·5012	1·764
March 3	+0·13065	0·07742	−0·00338		9·11726	4·904	0·28117	3·819	0·5003	1·761
17	+0·13039	0·07727	−0·00376		9·11642	4·907	0·27981	3·817	0·4990	1·758
April 1	+0·13067	0·07735	−0·00094		9·11709	4·909	0·28008	3·815	0·4996	1·759
14	+0·13033	0·07718	−0·00188		9·11605	4·908	0·27960	3·818	0·4987	1·760
28	+0·13033	0·07696	+0·00506		9·11544	4·912	0·27903	3·818	0·4980	1·760
May 12	+0·13020	0·07709	−0·00132		9·11558	4·913	0·27881	3·816	0·4980	1·760
26	+0·12997	0·07693	−0·00036		9·11475	4·910	0·27946	3·823	0·4979	1·763
June 9	+0·12997	0·07700	−0·00302		9·11495	4·917	0·27858	3·818	0·4975	1·760
30	+0·12962	0·07675	−0·00151		9·11365	4·920	0·27822	3·822	0·4965	1·758
July 7	+0·12940	0·07666	−0·00284	−0·00244	9·11303	4·922	0·27887	3·828	0·4965	1·765
21	+0·12932	0·07651	−0·00019		9·11248	4·928	0·27659	3·820	0·4949	1·761
August 4	+0·12897	0·07638	−0·00228		9·11154	4·935	0·27623	3·822	0·4942	1·762
18	+0·12885	0·07631	−0·00228		9·11112	4·944	0·27367	3·813	0·4925	1·758
September 1	+0·12829	0·07604	−0·00402		9·10939	4·937	0·27545	3·829	0·4925	1·765
15	+0·12812	0·07595	−0·00460		9·10887	4·943	0·27391	3·824	0·4914	1·763
29	+0·12808	0·07592	−0·00441		9·10871	4·943	0·27389	3·825	0·4913	1·763
October 14	+0·12819	0·07592	−0·00210		9·10886	4·946	0·27343	3·822	0·4911	1·762
27	+0·12778	0·07571	−0·00326		9·10759	4·942	0·27312	3·826	0·4902	1·764
November 27	+0·12739	0·07545	−0·00231		9·10618	4·944	0·27302	3·832	0·4893	1·767
December 22	+0·12742	0·07546	−0·00212		9·10626	4·952	0·27141	3·824	0·4885	1·763

The mean value of P employed in the reduction of the observations for January 20 and February 3, viz., + 0·00752, is the mean obtained from the observations made between 1862, December 24, and 1863, February 3.

In forming the mean value of P for the period, 1863, February 17, to 1863, December 22, the discordant result for April 28 has been omitted.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1863.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Horizontal Movement of the Air on each Day. Amount of Movement.	Rain in Inches read at
		in	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	
Jan. 1	..	29·741	52·3	40·7	48·3	46·9	55·0	36·7	44·6	42·4	1·4	5·4	0·8	+11·8	SW	SW	15·0	0·0	4·0	712	0·0
2	Greatest Declination S.	29·437	46·0	37·9	42·0	38·8	57·2	35·0	44·6	42·4	3·2	6·2	1·3	+ 5·6	SW	SW	14·0	0·0	1·8	344	0·0
3	Apogee	29·436	44·0	36·9	40·2	37·0	52·0	31·0	44·6	42·4	3·2	6·2	1·3	+ 3·8	SW	SSW	0·0	0·0	0·0	370	0·0
4	..	29·227	46·9	38·8	42·4	37·6	70·1	28·3	44·6	42·4	4·8	9·9	3·7	+ 6·1	SW	SW	9·0	0·0	0·8	385	0·2
5	Full.	28·933	48·6	39·4	44·0	43·0	51·0	35·3	44·6	42·4	1·9	4·2	1·5	+ 8·8	SSW	SSW	8·0	0·0	1·0	296	0·0
6	..	28·951	47·5	37·2	42·3	40·9	57·0	32·5	44·1	42·4	1·4	4·0	0·0	+ 6·3	SW; S	SE	3·0	0·0	0·2	178	0·3
7	..	29·134	37·5	31·7	36·9	34·5	52·0	25·5	43·6	41·4	2·4	5·7	0·0	+ 1·1	SW	SE	2·0	0·0	0·0	149	0·2
8	..	29·432	47·1	34·2	39·4	35·8	72·3	25·9	43·6	40·9	3·6	7·5	0·3	+ 3·9	SSE	SE	0·0	0·0	0·0	96	0·0
9	..	29·591	43·0	29·9	36·8	36·0	56·0	23·3	42·6	39·4	0·8	3·5	0·0	+ 1·4	Calm	SE	1·0	0·0	0·0	213	0·1
10	In Equator	29·541	42·0	34·8	37·8	34·0	58·0	32·2	42·1	38·4	3·8	4·8	1·0	+ 2·1	SE	ENE	3·0	0·0	0·3	232	0·1
11	..	29·750	40·0	36·8	38·1	35·9	42·0	32·2	41·6	38·4	2·2	3·3	0·0	+ 2·5		N	0·0	0·0	0·0	150	0·1
12	Last Qr.	29·955	44·5	27·7	36·9	34·7	59·3	24·0	42·1	38·4	2·2	6·0	0·0	+ 1·3	SW	S	3·0	0·0	0·3	255	0·3
13	..	29·724	46·8	36·5	40·8	39·1	60·0	34·0	40·6	38·4	1·7	3·1	0·4	+ 5·2	SSW	SW	1·0	0·0	0·0	169	0·1
14	..	30·098	41·5	34·7	37·1	34·6	59·8	32·0	40·6	37·9	2·5	3·7	0·5	+ 1·5	NE	NNE	3·0	0·0	0·1	216	0·1
15	..	30·256	42·5	35·5	38·8	35·0	59·0	27·0	40·6	37·4	3·8	5·3	1·9	+ 3·5	NE	NE	3·0	0·0	0·3	239	0·1
16	Greatest Declinations.	30·116	41·2	35·1	38·1	34·0	47·0	31·0	40·6	37·4	4·1	6·2	0·8	+ 2·6	ENE	NE	3·0	0·0	1·2	273	0·1
17	..	29·940	40·5	34·4	37·0	31·6	46·7	33·0	40·6	38·4	5·4	7·8	2·2	+ 1·1	NE	NE: SW	3·0	0·0	0·2	304	0·1
18	Perigee.	29·243	44·0	31·9	39·7	34·9	50·0	30·0	40·6	38·4	4·8	7·7	0·0	+ 3·4	SW	NW: W	6·0	0·5	2·0	440	0·0
19	New.	29·284	49·6	39·0	45·2	37·3	58·6	32·0	40·1	37·9	7·9	12·8	3·9	+ 8·7	NW	NW: WSW	10·0	1·0	2·5	635	0·1
20	..	29·126	49·9	38·0	41·3	31·2	72·0	37·0	40·6	38·4	10·1	12·1	9·0	+ 4·5	WSW	W	20·0	3·0	8·0	669	0·1
21	..	29·572	47·0	37·0	41·9	35·2	69·6	29·7	41·6	39·4	6·7	9·7	2·0	+ 4·8	W	WNW: WSW	9·0	0·0	2·0	458	0·1
22	..	29·629	53·0	40·1	47·8	43·8	65·6	28·3	41·6	38·4	4·0	8·0	2·3	+10·5	SW	SW	10·0	0·0	2·5	572	0·0
23	In Equator.	29·538	53·8	39·4	46·4	41·0	70·0	38·2	43·1	39·9	5·4	7·8	3·0	+ 8·1	SW	SW	15·0	0·0	3·5	493	0·1
24	..	29·594	51·0	36·9	44·4	36·3	73·0	32·7	43·6	39·4	8·1	15·0	1·7	+ 6·6	SW	WSW	15·0	0·0	4·0	570	0·1
25	..	30·127	49·2	36·9	43·3	37·3	66·0	30·0	43·6	40·4	6·0	8·8	1·9	+ 5·3	WSW	WSW	7·0	0·5	1·5	441	0·1
26	First Qr.	30·038	48·0	42·0	45·6	40·7	56·0	34·4	43·6	40·4	4·9	7·1	3·0	+ 7·3	SW	SW	12·0	0·0	3·0	596	0·1
27	..	30·127	52·0	35·5	41·9	32·8	67·0	33·0	43·6	41·4	9·1	12·1	4·4	+ 3·6	SW: NW	NW	8·0	0·0	1·5	277	0·1
28	..	30·296	47·0	32·2	39·2	33·3	77·8	25·0	43·6	41·4	5·9	11·3	3·2	+ 1·1	WSW	SW	3·0	0·0	0·3	380	0·1
29	..	29·683	55·2	37·8	48·0	44·6	85·6	28·0	43·6	41·4	3·4	9·2	1·7	+10·1	SW	SW	11·0	1·0	3·0	506	0·1
30	Greatest Dec. N. Apogee	29·375	51·5	46·0	49·0	46·8	55·4	43·8	44·6	42·4	2·2	4·4	0·4	+11·4	SW	SW	12·0	1·0	3·5	518	0·1
31	..	29·353	50·4	39·7	44·4	41·0	52·0	36·3	44·6	42·4	3·4	6·8	0·2	+ 7·1	SW	NW	5·0	0·0	1·5	328	0·1
Means	..	29·621	46·9	36·6	41·8	37·6	60·4	31·6	42·7	40·1	4·2	7·3	1·7	+ 5·2	...	...	..	..	..	Sum 11464	Su 2·7

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month	was 29in·522 on the 2nd;	The first minimum in the month	was 29in·352 on the 2nd.
The second maximum ..	was 29in·034 on the 6th;	the second minimum ..	was 28in·904 on the 5th.
The third maximum ..	was 29in·646 on the 9th;	the absolute minimum ..	was 28in·894 on the 6th.
The fourth maximum ..	was 29in·999 on the 12th;	the fourth minimum ..	was 29in·506 on the 10th.
The fifth maximum ..	was 30in·263 on the 15th;	the fifth minimum ..	was 29in·714 on the 13th.
The sixth maximum ..	was 29in·337 on the 19th;	the sixth minimum ..	was 29in·209 on the 19th.
The seventh maximum ..	was 29in·689 on the 21st;	the seventh minimum ..	was 28in·984 on the 20th.
The eighth maximum ..	was 29in·720 on the 23rd;	the eighth minimum ..	was 29in·441 on the 23rd.
The ninth maximum ..	was 30in·211 on the 25th;	the ninth minimum ..	was 29in·549 on the 24th.
The absolute maximum ..	was 30in·387 on the 28th;	the tenth minimum ..	was 29in·863 on the 26th.
		the eleventh minimum ..	was 29in·238 on the 31st.

The range in the month was 1in·493.

The mean for the month was 29in·621, being 0in·145 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 55°·2 on the 29th; the lowest was 27°·7 on the 12th; and the range in the month was 27°·5.

The mean ,, of all the highest daily readings was 46°·9, being 3°·8 *higher* than the average of the preceding 22 years.

The mean ,, of all the lowest daily readings was 36°·6, being 3°·2 *higher* than the average of the preceding 22 years.

The mean daily range was 10°·3, being 0°·6 *greater* than the average of the preceding 22 years.

The mean for the month was 41°·8 being 3°·7 *higher* than the average of the preceding 22 years.

NTH id AY, 63.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
1	o	o	8, li.-cl, w : 10, th.-r, w	10, st.-w : 10, st.-w.
2	o : w	~ : m	10, st.-w : 10, h.-sqs	9, ci, ci.-s, cu, cu.-s : o
3	m : ~	v	h-fr : 4, ci, ci.-s	7, ci, ci.-s, cu.-s : li.-cl, lu.-ha
4	o	w	10, h.-r, st.-w : o	4, ci : lu.-ha : ci.-s, oc.-r
5	w	w	10, fr.-h.-shs, w	10, fr.-h.-shs : v
6	o : ~	v	10 : 10, oc.-r	9, cu, ci.-cu, ci.-s : 10, h.-r
7	m	~	h.-fr : o, h	o : 8, ci.-cu, ci.-s, cu.-s : li.-cl.
8	~	w : o	2, li.-cl, h.-fr : 3, ci, ci.-s	1, ci, ci.-cu : o, f
9	o	m : o	h.-fr. : 10, th.-f	10 : v : 10, m.-r
10	o	o	10, ci.-s	10, ci.-s : 10, r
11	o	o	10, th.-r	10, r : o
12	o	o	o, h, h.-fr : o	4, ci, s : 10 : 10, r
13	o	o	10, h.-r : c.-h.-r	10, gt.-glm : 5, ci.-s, s, oc.-r
14	o	o	10, oc.-r : 10	5, v, ci, ~ : o : 10, th.-r
15	o	o	5, ci.-s : 10	9, ci.-s, cu.-s : 7, v, li.-cl
16	o	o	10 : 10, cu.-s, ci.-s	10, ci.-s
17	o	o : w	10	10
18	o : ~	o	10, h.-r, w : 8, ci, ci.-s, li.-sc	9, ci.-s, cu.-s : 10, s, ci.-s
19	o	o	10, w : 7, ci, ci.-s, w	9, ci.-s, cu.-s, ci.-cu : v, st.-w
20	o	v : s, sps	st.-w : 10, v, st.-w	v, ci, ci.-cu, st.-w : 1, li.-cl, st.-w
21	o	o	st.-w : 10, v, w, sl.-r	6, v, ci : 3, li.-cl : 10, sl.-r
22	o	~ N : o : m	10, w, r : 9, ci.-s, sc, w	10, ci.-s, st.-w : 10, sl.-r
23	o	o	10 : 10, ci.-s, sc, st.-w	10, oc.-shs : 5, ci, ci.-s : o
24	~	w : ~	7, ci, ci.-cu, st.-w	6, v, ci, ci.-cu, st.-w : 7 ci.-cu,ci.-s : o
25	o	o	4, li.-cl	8, ci, ci.-cu, ci.-s : 9, ci.-s
26	o : m	o : ~	10, ci.-s	10, ci.-s : v. lu.-co : 10, ci.-s, st.-w
27	o	v	10, st.-w : 10, shs.-r	10 : 1. li.-cl : o. h
28	o	o	h.-fr : 9, ci, ci.-s	8, ci, ci.-s : 10, v, ci.-s, lu.-ha: 10, s, ci.-s
29	o	o	10, ci.-s, s : 10, th.-r, st.-w	8, ci, ci.-cu, ci.-s : 3, li.-cl
30	o : ~ N	m N : w	10, th.-r	10, ci.-s, sc, w : v, ci, ci.-s : 10, sc, st.-w, th.-r
31	o	o	10, h.-r : 7, ci, ci.-s, cu, ci.-cu, oc.-r	10, th.-r : 10, ci.-cu, ci.-s, v: o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 47°·9 on the 30th; and the lowest was 28°·2 on the 12th.

The mean ,, was 37°·6, being 2°·4 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0in·225, being 0in·022 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2gr·6, being 0gr·2 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 85 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 547 grains, being 7 grains *less* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·1.

WIND.

The proportions were of N. 4, S. 11, W. 11, E. 4 and Calm 1. The greatest pressure in the month was 20lb·0 on the square foot on the 20th.

RAIN.

Fell on 16 days in the month, amounting to 2in·7, as measured in the simple cylinder gauge partly sunk below the ground; being 1in·0 *greater* than the average fall of the preceding 48 years.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Horizontal Movement of the Air on each Day.	Rain in Inches.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	
Feb. 1	..	29·637	48·2	34·6	42·3	39·6	52·0	31·0	44·6	42·4	2·7	6·7	1·7	+ 5·1	SW	WSW	7·0	0·0	1·0	474	0·1
2	..	29·758	49·8	40·1	46·1	43·3	55·6	35·3	45·6	42·9	2·8	6·7	0·6	+ 9·1	SW	SW	9·0	0·0	2·5	488	0·7
3	Full	29·671	50·6	37·1	43·7	41·9	64·6	32·6	45·1	42·4	1·8	5·6	0·6	+ 6·4	SW	W	4·0	0·0	1·5	335	0·3
4	..	29·970	48·5	32·6	42·1	39·8	60·0	29·5	45·6	43·4	2·3	6·5	1·5	+ 4·4	W : SW	WSW	14·0	0·0	3·0	516	0·1
5	..	30·042	51·6	44·3	47·0	39·7	73·0	39·5	44·6	42·9	7·3	11·6	2·4	+ 8·6	NW	WSW	12·0	0·0	2·5	364	0·2
6	In Equator	30·155	52·1	44·2	47·7	46·1	65·0	39·8	45·6	43·4	1·6	3·2	0·2	+ 8·7	W	SW	5·0	0·0	2·0	341	0·3
7	..	30·031	53·1	44·7	48·5	45·6	68·7	44·7	46·1	43·4	2·9	8·0	0·2	+ 9·3	SW	WSW	5·0	0·0	1·5	252	0·3
8	..	29·829	47·2	39·1	41·7	36·6	55·0	35·0	46·1	43·4	5·1	7·6	1·8	+ 2·5	WSW	NW	4·0	0·0	0·3	261	0·8
9	..	30·036	44·9	29·8	37·2	31·5	69·0	..	46·1	43·4	5·7	10·8	3·6	— 1·8	WNW	SW	3·0	0·0	0·2	284	0·2
10	..	30·062	48·8	37·3	43·3	40·4	60·8	30·0	45·6	43·4	2·9	4·8	1·3	+ 4·6	SW	SW	3·5	0·0	0·4	272	0·2
11	Last Qr.	30·058	49·1	38·6	43·0	38·1	85·0	34·1	45·6	43·4	4·9	8·4	2·4	+ 4·5	WSW	SW	2·0	0·0	0·1	303	0·1
12	..	30·248	48·6	38·5	43·1	36·4	69·8	33·0	45·6	43·9	6·7	11·3	0·0	+ 4·8	SW : NE	N : NW	0·0	0·0	0·0	102	0·1
13	Greatest Declination S.	30·302	48·6	29·7	38·3	36·0	88·9	..	45·6	43·4	2·3	6·9	0·0	+ 0·3	Calm	E	0·0	0·0	0·0	178	0·1
14	..	30·452	44·9	31·2	37·9	34·0	84·6	25·6	44·6	42·4	3·9	7·0	0·7	— 0·1	SE	ESE	3·0	0·0	0·2	254	0·0
15	Perigee	30·435	46·8	29·9	38·3	34·2	93·0	25·0	44·6	41·9	4·1	8·0	3·3	+ 0·2	E	ESE	0·0	0·0	0·0	163	0·0
16	..	30·472	51·0	27·8	37·9	30·4	100·2	..	45·6	40·9	7·5	17·4	2·7	— 0·2	SE	SE	0·0	0·0	0·0	78	0·0
17	..	30·447	51·3	27·8	39·3	33·0	90·0	22·3	42·6	39·4	6·3	14·8	4·8	+ 1·1	Calm	SW	0·0	0·0	0·0	164	0·0
18	New	30·327	50·0	27·2	36·5	32·5	92·0	19·5	42·6	39·4	4·0	16·0	0·0	— 1·8	SW	WSW	0·0	0·0	0·0	168	0·0
19	In Equator	30·241	45·0	38·7	41·2	41·2	48·9	35·0	42·6	39·4	0·0	0·0	0·0	+ 2·8	WSW	NE	0·0	0·0	0·0	75	0·0
20	..	30·226	45·0	37·8	40·2	36·6	55·0	37·6	42·6	39·4	3·6	7·7	1·0	+ 1·7	NE : SE	SE	0·0	0·0	0·0	58	0·0
21	..	30·175	53·0	30·5	39·8	37·4	89·3	29·0	42·1	39·4	2·4	8·2	0·6	+ 1·3	Calm	SW	0·0	0·0	0·0	208	0·1
22	..	30·137	48·1	37·2	42·7	35·6	77·5	29·7	42·6	39·4	7·1	10·3	0·0	+ 4·1	WSW	NNW	0·0	0·0	0·0	201	0·0
23	..	30·153	49·8	32·2	41·8	38·6	60·9	27·8	42·6	40·4	3·2	10·9	1·3	+ 2·9	NNW : WSW	NW	0·0	0·0	0·0	206	0·0
24	..	30·184	47·0	40·3	42·8	40·0	53·0	40·3	42·1	39·9	2·8	5·0	0·5	+ 3·7	NE	NE : SE	0·0	0·0	0·0	104	0·0
25	First Qr.	30·282	50·0	36·1	43·5	39·8	68·6	33·2	44·6	42·4	3·7	9·2	0·0	+ 4·0	SW	SW	0·0	0·0	0·0	215	0·0
26	Greatest Declination N.	30·222	51·0	40·8	45·4	36·6	70·3	37·8	44·1	41·4	8·8	13·0	2·8	+ 5·7	SW	SW	2·0	0·0	0·0	315	0·0
27	Apogee	30·120	54·8	38·0	45·1	38·7	90·0	38·0	44·6	42·4	6·4	13·4	1·8	+ 5·3	SW	SW	2·0	0·0	0·0	245	0·0
28	..	30·069	55·7	32·9	42·6	38·7	91·6	28·0	45·1	42·4	3·9	14·6	0·0	+ 2·6	SW	SW	0·0	0·0	0·0	218	0·0
Means	..	30·141	49·5	35·7	42·1	37·9	72·6	32·5	44·4	41·9	4·2	9·1	1·3	+ 3·6	...	...	..	..	..	Sum 6842	Sum 5·0

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·635 on the 1st; the absolute minimum in the month was 29in·595 on the 1st.
The second maximum ,, was 29in·781 on the 2nd; the second minimum ,, was 29in·606 on the 3rd.
The third maximum ,, was 30in·060 on the 4th; the third minimum ,, was 29in·852 on the 4th.
The fourth maximum ,, was 30in·168 on the 6th; the fourth minimum ,, was 29in·830 on the 8th.
The fifth maximum ,, was 30in·101 on the 10th; the fifth minimum ,, was 30in·039 on the 11th.
The absolute maximum ,, was 30in·519 on the 13th; the sixth minimum ,, was 30in·417 on the 14th.
The seventh maximum ,, was 30in·488 on the 16th; the seventh minimum ,, was 30in·119 on the 22nd.
The eighth maximum ,, was 30in·210 on the 23rd; the eighth minimum ,, was 30in·114 on the 23rd.
The ninth maximum ,, was 30in·295 on the 25th.
The range in the month was 0·in924.
The mean for the month was 30in·141, being 0in·353 *higher* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 55°·7 on the 28th; the lowest was 27°·2 on the 18th.
The range ,, was 28°·5.
The mean ,, of all the highest daily readings was 49°·5, being 4°·6 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 35°·7, being 2°·2 *higher* than the average of the preceding 22 years.
The mean daily range was 13°·8, being 2°·4 *greater* than the average of the preceding 22 years.
The mean for the month was 42°·1, being 3°·4 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Feb. 1	0	0	v : 10, sc, w	10, sc, th.-r : 0 : 7, li.-cl
2	0	0	10, sc, w	10, sc, th.-r : 10, r
3	m : s N	0 : s	10, r	10, oc.-r : v : 0
4	s : 0	0	0, h.-fr : 0	10, ci.-s : 10, oc.-r, st.-w
5	0 : w	s	10, oc.-shs, st.-w : 10, ci.-s	10 : 4, v, cu, ci, ci.-s, h : 2, li.-cl
6	s	s	10, ci.-s	10, ci.-s, ci.-cu, ci : 10, ci.-s
7	w	w : 0	10, ci.-s	10, ci.-s : 8, ci, ci.-cu, ci.-s, cu.-s : 10
8	0	0	10 : 10, r	8, cu, ci.-s : 7, v, sl.-r
9	s : m	w	0, h, h.-fr	0, h : 9, ci.-s, ci : v, li.-cl
10	w : s	s	10, ci.-s	10, ci.-s : v
11	0	0 : m	10, ci.-s	v, ci.-s, ci, ci.-cu : 7. ci, ci.-cu, cu.-s : 0
12	0	0	0 : 10, th.-r	6, ci, ci.-s : 8, ci, ci.-s, h : 0, f
13	m : s	s	1, li.-cl, h.-fr	0 : 0
14	s	v	3, ci, ci.-cu	4. ci, ci.-cu : 0 : 0
15	s, sps	s	0, h.-fr	0 : 0
16	s	w : s, sps	0, h.-fr	0 : 0
17	s	s : s N, s P, sps	0, h.-fr : 0, h, f	0 : 0
18	s : s N, s P	v : s N, s P	0, h.-fr : 0, h, f	0 : 9, ci.-s, ci.-cu : 10, ci.-s
19	s : w	0	10, ci.-s : 10, h.-r, f	10, th.-r, th.-f : 10, th.-r
20	0	m : s	10 : 10	10 : 9, ci.-cu, ci.-s, ci : 10
21	s	v : s	10 : 10, ci.-s, th.-f	0, v : 9, ci.-cu, v : 0
22	s	w : s	sl.-r : 1, li.-cl, h	7, li.-cl, ci.-cu, cu.-s : 9
23	s	s : 0	8, ci, ci.-cu, cu.-s	10, li.-cl : 10. th.-r : 10, li.-shs
24	0	v : s	10 : 10	10 : 10, sl.-r
25	0	0 : w	8, ci, ci.-cu	10, ci.-cu, ci.-s, cu.-s : 10, ci.-s, cu.-s
26	0	0	10, ci.-s, cu.-s : 10, ci.-cu, ci.-s, ci	10, ci.-s : 10
27	0	0 : m	10, ci.-s	10, ci.-s : 7, ci, ci.-cu : 0
28	w	0	10, th.-f	7, li.-cl, h : 7, ci, ci.-cu : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 47°·3 on the 6th; and the lowest was 27°·6 on the 18th.

The mean ,, was 37°·9, being 3°·2 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·228 being 0^{in}·025 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·6, being 0^{gr}·2 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 86 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 557 grains, being 4 grains *greater* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·5.

WIND.

The proportions were of N. 2, S. 8, W. 12, E. 4, and Calm 2. The greatest pressure in the month was 14^{lbs}·0 on the square foot on the 4th.

RAIN.

Fell on 9 days in the month, amounting to 0^{in}·5, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·1 *less* than the average fall of the preceding 48 years.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h AM. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h AM. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
March 1	..	29·787	50·3	35·7	43·5	39·6	64·0	27·9	45·1	42·4	3·9	7·9	0·7	+ 3·4	SW	SW	3·0	0·0	0·3	331	0·0
2	..	29·768	57·8	40·9	48·5	45·9	91·0	36·0	45·6	42·4	2·6	6·2	1·7	+ 8·5	SW	SW	4·0	0·0	0·4	317	0·0
3	..	29·653	64·0	39·3	50·6	39·4	106·5	34·2	45·6	42·4	11·2	20·3	7·8	+10·7	S: SE	SE	0·0	0·0	0·0	156	0·0
4	..	29·510	63·0	36·8	49·8	41·0	99·7	30·5	46·6	43·4	3·8	20·0	0·0	+ 9·9	SE	SE: SW	0·0	0·0	0·0	110	0·0
5	Full; In Equator.	29·519	61·6	35·2	48·1	42·2	108·0	29·6	46·6	44·9	5·9	16·7	1·8	+ 8·1	S	SSW: SE	0·0	0·0	0·0	208	0·0
6	..	29·314	56·8	43·0	48·0	42·6	97·0	36·9	47·1	45·4	5·4	12·2	3·2	+ 7·9	SSW	SW	10·0	0·0	2·0	448	0·0
7	..	29·379	50·0	37·7	42·4	37·6	78·5	32·3	46·1	44·9	4·8	11·0	0·7	+ 2·3	SW	SW: S	5·0	0·0	0·7	243	0·0
8	..	29·447	47·5	33·3	39·9	32·9	82·0	30·0	46·1	44·4	7·0	14·5	4·2	— 0·2	W	NW	10·0	0·0	2·0	306	0·0
9	..	29·374	47·2	29·4	37·4	29·7	89·4	24·3	46·6	44·4	7·7	13·9	5·3	— 2·7	WSW	SW: Calm	0·0	0·0	0·0	58	0·0
10	..	29·214	46·8	28·9	36·9	31·0	69·3	28·9	46·1	43·9	5·9	11·7	3·0	— 3·3	Calm	NE: Calm	0·0	0·0	0·0	105	0·0
11	..	29·439	44·0	31·4	35·4	30·4	78·0	26·0	46·1	43·9	5·0	8·8	1·1	— 4·9	Calm: NE	NNW: W	0·0	0·0	0·0	210	0·0
12	Last Quarter; Greatest Dec. S.	29·119	43·7	28·5	36·2	35·0	53·8	24·8	45·6	43·4	1·2	5·3	0·5	— 4·3	SW: SSE	SE: W	5·0	0·0	0·8	241	0·0
13	..	29·166	54·0	33·1	40·4	36·7	98·3	29·3	46·6	43·9	3·7	12·6	0·0	— 0·6	W	Calm	0·0	0·0	0·0	85	0·0
14	..	29·229	56·7	29·8	40·5	36·1	91·8	24·0	46·6	43·9	4·4	12·0	2·3	— 0·8	SW	S: SE	2·5	0·0	0·1	132	0·0
15	Perigee	29·160	45·5	35·5	39·7	36·5	60·0	31·0	46·6	43·4	3·2	6·1	1·9	— 1·8	NW	NE	0·0	0·0	0·0	255	0·0
16	..	29·785	47·9	34·2	40·5	33·4	86·5	29·7	45·6	42·4	7·1	12·2	1·4	— 1·2	NE	NNE	9·0	0·0	2·0	407	0·0
17	..	30·041	47·2	32·9	39·0	30·2	86·7	27·2	45·6	42·4	8·8	13·2	0·0	— 2·8	NNE	N	2·5	0·0	0·1	224	0·0
18	In Equator	29·822	46·0	28·1	36·0	27·2	86·0	22·7	45·6	42·4	8·8	16·3	0·0	— 5·8	SW	NE	0·0	0·0	0·0	161	0·0
19	New	29·934	50·5	30·6	40·3	33·8	77·5	22·5	46·1	42·9	7·0	15·8	3·6	— 1·5	W: N	N: SW	2·0	0·0	0·0	271	0·0
20	..	29·717	57·9	36·8	46·1	41·7	86·5	30·4	46·1	42·9	4·4	12·7	2·9	+ 4·2	SW	NW	9·0	0·0	2·0	476	0·0
21	..	29·961	51·2	40·4	45·1	35·8	81·0	36·3	44·6	42·4	9·3	14·0	5·3	+ 3·2	NW	NNE	10·0	0·0	2·5	196	0·0
22	..	30·218	60·2	30·5	45·5	41·4	96·0	25·5	46·6	43·9	4·1	14·4	0·0	+ 3·6	Calm	SW	0·0	0·0	0·0	204	0·0
23	..	30·257	63·7	39·0	48·3	42·5	102·6	33·2	46·6	43·9	5·8	19·2	0·0	+ 6·3	SW: W	NW: SW	0·0	0·0	0·0	164	0·0
24	..	30·311	60·8	40·8	50·6	42·9	96·0	33·2	47·1	44·4	7·7	14·4	0·0	+ 8·5	WSW	NW: Calm	0·0	0·0	0·0	92	0·0
25	Greatest Declination N	30·324	58·8	36·4	47·8	43·7	84·7	29·1	47·3	44·4	4·1	13·7	0·0	+ 5·6	Calm	Calm: SW	0·0	0·0	0·0	158	0·0
26	..	30·165	59·0	37·9	48·2	39·9	96·5	29·9	47·3	44·4	8·3	14·6	1·7	+ 5·9	SW	NW: W	6·0	0·0	0·8	320	0·0
27	First Quarter; Apogee	30·165	55·4	35·7	45·4	37·2	86·0	27·0	47·1	44·4	8·2	15·8	0·8	+ 3·0	NW	W	4·0	0·0	0·5	380	0·0
28	..	29·764	58·0	40·2	50·1	41·5	82·5	32·9	47·1	44·4	8·6	16·4	5·1	+ 7·5	WNW	NW	5·0	0·0	..	431	0·0
29	..	29·670	59·6	46·0	51·6	42·1	90·5	37·8	47·1	44·4	9·5	15·0	5·5	+ 8·8	NW	NW	10·0	0·0	2·0	371	0·0
30	..	29·880	53·3	40·8	45·8	41·7	..	40·4	48·6	46·4	4·1	7·8	1·4	+ 2·8	NW	ESE	3·0	0·0	0·0	166	0·0
31	..	30·083	51·9	36·2	42·5	33·9	..	36·1	48·6	46·4	8·6	15·0	4·8	— 0·9	E	SE	2·0	0·0	0·0	126	0·0
Means	..	29·715	53·7	35·7	43·9	37·6	86·4	30·3	46·5	43·9	6·3	13·2	2·1	+ 2·6	...	...	..	..	..	Sum 7352	Sum 0·6

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·448 on the 7th; the first minimum in the month was 29in·243 on the 6th.
The second maximum ,, was 29in·494 on the 8th; the second minimum ,, was 29in·298 on the 7th.
The third maximum ,, was 29in·540 on the 11th; the third minimum ,, was 29in·202 on the 10th.
The fourth maximum ,, was 29in·344 on the 14th; the absolute minimum ,, was 29in·005 on the 12th.
The fifth maximum ,, was 30in·056 on the 17th; the fifth minimum ,, was 29in·080 on the 15th.
The sixth maximum ,, was 29in·966 on the 19th; the sixth minimum ,, was 29in·790 on the 18th.
The absolute maximum ,, was 30in·388 on the 25th; the seventh minimum ,, was 29in·682 on the 20th.
The eighth maximum ,, was 30in·257 on the 27th; the eighth minimum ,, was 30in·137 on the 26th.
The ninth maximum ,, was 30in·097 on the 31st; the ninth minimum ,, was 29in·649 on the 29th.
The range in the month was 1in·383.
The mean for the month was 29in·715, being 0in·056 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 64°·0 on the 3rd; the lowest was 28°·1 on the 18th; and the range in the month was 35°·9.
The mean ,, of all the highest daily readings was 53°·7, being 3°·7 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 35°·7, being 0°·3 *higher* than the average of the preceding 22 years.
The mean daily range was 18°·0, being 3°·4 *greater* than the average of the preceding 22 years.
The mean for the month was 43°·9, being 2°·0 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY A.M.	ELECTRICITY P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
March 1	o	o	10, sc, w	10, sl.-r : v : o
2	o	o	10, ci.-s, sl.-r	10, ci.-s : v, li.-cl : o
3	o	m	o : o	o : o
4	s	w : s	3, ci	3, ci : 3, ci.-s, ci : 1, li.-cl
5	s : s	o : s	o : 10, th.-f : 2, ci, ci.-s	1, ci, ci.-s, cu.-s : 3, ci, ci.-cu, ci.-s
6	w	o	o	10, st.-w : 10,oc.-shs,st.-w : v,ci.-s,s,oc.-shs
7	o	m : o	8, li.-cl : 7, ci, ci.-s, ci.-cu	10, ci.-s : 10, ci.-s, c.-h.-r
8	o	s N, sps, g-cur : o	1, ci, ci.-s, v	9, ci.-s, ci.-cu, hl, su : v, fr.-r
9	s	o : m	1, ci, ci.-s	9, li.-cl, h : 7,ci,ci.-cu,ci.-s,cu.-s : 10
10	s	v : o	h.-fr : o, h	10, li.-cl, h : 10, v, r : o
11	o	w : o	10, ci.-s	10, ci.-s : 9,ci.-cu,ci.-s,v : o, h
12	o	s N : o	o, h.-fr : 10	10, r : 10, v, r : o, h
13	m	w : o	o, h : h	10, ci.-s, h : 7, ci.-s, v, m : o, h, f
14	s	o : w N	6, ci, ci.-s, h	10, ci.-s : 10, ci.-s : 10, sl.-r
15	o	o	10, h.-r : 10	10, h.-r : v : o
16	o	o	10, ci.-s	10, v, st.-w : 9, ci.-s, ci, sl.-r : 9, v
17	o	o	o : 10, ci.-s, ci.-cu	6, ci, ci.-cu, ci.-s, cu.-s : o
18	w	o : w : o	h.-fr : 10, ci, ci.-cu, ci.-s, cu.-s	10 : 5, ci, ci.-cu, ci.-s: o, h, h.-fr
19	o : w	o	o, h, h.-fr : 10, ci.-s	9, ci, ci.-cu, cu.-s : o, f
20	o	o	sl.-r : 10, ci.-s	10, st.-w : 10
21	o	o	1, ci, ci.-s	10, ci.-s : 10, ci.-s : o
22	o	w : m	1, ci, h	o, h : 10, v : 10
23	s	w : m	10 : li.-cl	5, li.-cl, h : 9, ci, ci.-s, cu.-s: o
24	m	o	10, ci, ci.-cu, ci.-s	10, li.-cl, h : o, m
25	s	w : o	10, ci.-cu, ci.-s	10, ci.-s : o, h : o
26	o : s	w : s	o : 10, ci.-s : o, h, v	9, ci.-s : 10, ci.-s, cu.-s : o
27	v	o : s	10, li.-cl, h	10, ci.-s : v : o
28	o	w	10, st.-w	10, ci.-s, ci.-cu, cu.-s : 10, ci.-s
29	m	o : m	10, ci.-s, st.-w	7, ci, ci.-cu, cu.-s : 8, ci, ci.-s, v
30	o	o	10, th.-r	10, th. r
31	w	o : v	10, ci, ci.-cu, cu.-s	9, ci, ci.-cu, ci.-s, cu.-s : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 48°·3 on the 2nd; and the lowest was 24°·1 on the 18th.

The mean ,, was 37°·6, being 0°·9 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·225 being 0^{in}·006 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·6, being 0^{gr}·1 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 547 grains, being 2 grains *less* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·4.

WIND.

The proportions were of N. 7, S. 6, W. 11, and E. 3, and Calm 4. The greatest pressure in the month was 10^{lbs}·0 on the square foot on the 6th, 8th, 21st, and 29th.

RAIN.

Fell on 10 days in the month, amounting to 0^{in}·7, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·9 *less* than the average fall of the preceding 48 years.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Wind as deduced from Anemometers. Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h A.M.
		in.	°	°	°	°	■	□	°	°	°	°	°	°				lbs.	lbs.	lbs.	miles.	in.
April 1	..	29·939	55·0	28·3	41·2	35·3	..	19·4	49·6	47·4	5·9	17·6	0·0	— 2·4	SE : Calm	SE		0·0	0·0	0·0	132	0·0
2	In Equator.	29·976	58·8	29·3	43·6	36·8	95·0	22·1	50·1	47·9	6·8	17·9	0·0	— 0·5	NE	NE : SE		0·0	0·0	0·0	120	0·0
3	..	30·040	61·0	30·9	46·2	37·8	89·5	25·0	49·8	47·6	8·4	19·2	1·7	+ 1·7	Calm : SW	Calm		0·0	0·0	0·0	170	0·0
4	Full.	29·804	57·0	38·9	46·0	40·8	73·0	34·6	49·7	47·5	5·2	14·8	2·2	+ 1·2	SW	WSW : NW		5·0	0·0	0·5	332	0·0
5	..	29·660	55·8	37·7	45·3	41·9	81·0	28·0	49·7	47·5	3·4	7·4	1·5	+ 0·2	SW	SW		7·0	0·0	1·8	504	0·0
6	..	29·427	58·1	46·1	50·5	44·7	87·0	41·0	49·7	47·5	5·8	12·3	2·7	+ 5·1	SW	SSW		6·5	0·0	1·3	377	0·0
7	..	29·356	56·9	40·3	46·0	38·2	93·0	37·0	49·8	47·6	7·8	18·4	1·5	+ 0·5	W	SW		4·0	0·0	0·6	313	0·1
8	Greatest Declination S.	29·528	54·7	34·8	45·0	44·1	63·4	32·8	49·6	48·4	0·9	8·8	0·0	— 0·5	WSW	SW		4·0	0·0	0·4	301	0·0
9	Perigee.	29·639	58·3	47·8	51·8	50·4	78·0	46·0	50·8	48·6	1·4	6·7	0·6	+ 6·4	SW	SW		4·0	0·0	0·3	225	0·0
10	..	29·600	65·3	49·8	55·6	51·0	77·0	46·7	51·1	49·4	4·6	13·9	0·6	+10·5	SW	SE		1·0	0·0	0·0	173	0·0
11	Last Qr.	29·683	59·4	48·8	52·5	47·1	75·0	46·0	52·6	50·4	5·4	10·3	2·2	+ 7·5	W	NE		0·0	0·0	0·0	190	0·0
12	..	29·791	60·5	46·0	50·7	44·7	97·5	44·2	53·6	51·4	6·0	15·4	2·5	+ 5·8	NE	E		2·0	0·0	0·0	200	0·0
13	..	29·824	58·2	42·0	48·7	41·3	96·8	36·1	53·6	51·4	7·4	16·2	1·5	+ 3·5	NE	E		3·0	0·0	0·2	159	0·0
14	..	29·778	60·0	36·8	46·4	44·4	83·7	34·1	53·8	51·9	2·0	11·0	0·0	+ 0·9	NE	SW		2·0	0·0	0·0	169	0·0
15	In Equator	29·839	67·0	36·8	50·9	44·6	109·0	35·3	54·1	51·9	6·3	21·4	0·0	+ 5·2	SW	Calm		0·0	0·0	0·0	74	0·0
16	..	29·851	67·7	44·7	54·8	47·2	105·2	35·1	54·6	52·4	7·6	14·8	0·0	+ 8·8	Calm	NE		0·0	0·0	0·0	123	0·0
17	..	29·961	64·5	43·1	52·2	45·4	90·0	32·0	55·1	52·9	6·8	13·9	1·1	+ 6·0	N	NW		2·0	0·0	0·0	166	0·0
18	New.	30·092	64·0	42·5	50·6	45·9	98·5	36·0	55·6	54·4	4·7	11·8	0·9	+ 4·2	NE	NE : SE		2·0	0·0	0·0	135	0·0
19	..	29·961	66·1	33·6	48·8	43·6	106·4	24·3	56·6	54·4	5·2	15·2	0·0	+ 2·3	SE	SW		0·0	0·0	0·0	119	0·0
20	..	29·716	69·3	38·5	51·8	45·8	104·0	38·4	56·6	54·4	6·0	15·4	0·5	+ 5·1	Calm	SW : W		4·0	0·0	0·3	308	0·0
21	..	29·684	60·7	38·2	48·8	45·4	91·0	35·0	55·8	53·6	3·4	9·2	2·3	+ 1·8	W	SW		5·0	0·0	1·8	527	0·0
22	Greatest Declination N.	29·604	62·8	46·9	51·6	45·0	93·3	46·7	56·1	53·9	6·6	15·6	4·2	+ 4·3	WSW	NW : W		12·0	0·0	4·0	343	0·0
23	..	29·971	61·6	38·9	47·6	35·8	95·0	28·1	56·1	53·6	11·8	18·8	8·8	0·0	W	NW		8·0	0·0	2·5	362	0·0
24	Apogee.	30·214	61·7	37·0	49·0	38·6	95·7	25·0	55·8	53·6	10·4	19·8	1·4	+ 1·4	NW	NW		3·0	0·0	0·6	309	0·0
25	..	30·117	67·0	44·0	53·9	47·0	103·4	35·2	55·8	53·6	6·9	16·2	3·3	+ 6·3	NW	NW		4·0	0·0	1·3	265	0·0
26	First Qr.	30·082	67·1	40·8	53·0	44·6	99·2	30·5	55·3	53·9	8·4	21·6	2·5	+ 5·4	W	NW : WSW		0·0	0·0	0·0	214	0·0
27	..	29·894	68·0	40·8	54·4	45·0	104·5	38·6	55·3	53·9	9·4	20·7	3·0	+ 6·0	WSW	NW		8·0	0·0	1·5	388	0·0
28	..	29·652	59·5	44·3	47·8	35·4	97·0	..	55·3	53·9	12·4	22·6	7·8	— 0·7	W	NW		7·0	0·0	1·5	384	0·0
29	In Equator	29·727	55·2	39·2	43·4	34·9	85·8	29·4	56·1	53·9	8·5	13·4	3·8	— 5·7	NW : N	N		11·0	0·0	2·0	430	0·0
30	..	29·986	54·9	37·0	43·4	38·4	79·3	29·0	55·6	52·4	5·0	13·8	3·6	— 6·1	NE	NE		7·0	0·0	1·0	191	0·1
Means	..	29·813	61·2	40·1	49·1	42·7	91·3	34·3	53·4	51·4	6·3	15·1	2·0	+ 2·8	...	...		..	..	..	Sum 7703	Sum 0·43

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·096 on the 3rd; the second maximum ,, was 29in·684 on the 9th; the third maximum ,, was 29in·836 on the 13th; the fourth maximum ,, was 30in·131 on the 18th; the absolute maximum ,, was 30in·254 on the 24th.

The first minimum in the month was 29in·907 on the 1st; the absolute minimum ,, was 29in·337 on the 7th; the third minimum ,, was 29in·531 on the 10th; the fourth minimum ,, was 29in·758 on the 14th; the fifth minimum ,, was 29in·524 on the 22nd; the sixth minimum ,, was 29in·619 on the 28th.

The range in the month was 0in·917.

The mean for the month was 29in·813, being 0in·061 *greater* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 69°·3 on the 20th; the lowest was 28°·3 on the 1st; and the range in the month was 41°·0.

The mean ,, of all the highest daily readings was 61°·2, being 4°·4 *higher* than the average of the preceding 22 years.

The mean ,, of all the lowest daily readings was 40°·1, being 1°·4 *higher* than the average of the preceding 22 years.

The mean daily range was 21°·1, being 3°·0 *greater* than the average of the preceding 22 years.

The mean for the month was 49°·1, being 2°·8 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
April 1	w	m : v	0	0 : 3, ci, ci.-s : 1, li.-cl
2	m : s	0 : m	1, li.-cl : 0, h	0 : 0
3	m	0	10	9, gt.-glm : 10
4	m	0 : v	10, ci.-s, li.-cl	10, ci.-s, th.-r : v : 0, h, f
5	0	0	10, st.-w	10, st.-w
6	0	0	10, ci.-s, sc, st.-w	7, ci, ci.-cu, ci.-s, cu.-s : 10, ci.-s, li.-shs
7	0	0	10, r : 4, ci, ci.-s, ci.-cu, cu.-s	8, ci, cu, ci.-s, cu.-s, hl : 5, ci.-s, ci.-cu, cu.-s, hl, r, v
8	0	s N : w : 0	3, ci, cu, ci.-cu, cu.-s	10, c.-r : 10, oc.-r
9	0 : w	0 : m	10, th.-r : 7, ci : 10, ci.-s	10, ci.-s : 8, ci.-s, v
10	w	w : s	10, ci.-s, sl.-r	8, ci, ci.-cu, cu.-s : 10, th.-r
11	w N	0 : s	10	10, ci.-s : 10
12	w	w : m	10, ci.-s, sl.-r : li.-cl	6, ci : 5, v, li.-cl
13	m	w : s	9, ci, ci.-cu, cu.-s	7, ci, ci.-cu, ci.-s : 2, ci, ci.-s : 5, ci, ci.-s, v
14	w	w : s, sps	10, ci.-s	5, ci, ci.-cu, cu.-s : 8
15	w	w : w N : 0	5, ci, ci.-cu, cu.-s	5, ci.-s, ci : 9, ci.-s, cu.-s, ci.-cu : 2, ci.-s, sl.-r
16	0 : m	0 : w	10 : 10	4, ci, ci.-s : 10, ci.-s, ci.-cu : 10, ci.-s
17	0	0 : w	0, h	9, ci, ci.-cu, ci.-s, h : 4, ci, ci.-cu : 0, h
18	0	0 : m	10, ci.-s	10 : 5, ci, ci.-cu, cu.s, cu : 0
19	0	w : 0	0 : 0	0 : li.-cl : 7, ci, ci.-s
20	m	0 : m	10, ci.-cu	10, ci, ci.-cu, ci.-s, cu.-s : 9, li.-cl
21	w	0 : m	7, ci, ci.-s	10, ci.-s, cu.-s, oc.-r : 2, li.-cl, st.-w
22	0	w N : w : m	st.-w : 10, ci.-s, st.-w, r	10, ci.-s, cu.-s, ci.-cu : 2, li.-cl : 0
23	m : w	w P. w N : w	0 : 1, li.-cl : 9, ci, ci.-cu, cu.-s	6, ci, ci.-cu, cu.-s, cu : 9, ci.-s, ci.-cu, v : 0
24	w	w N : m	2, ci, ci.-cu	3, ci, ci.-cu : 9, ci, ci.-s, v
25	0	0	10, ci.-s	6, ci, ci.-cu, cu.-s : 3, ci, ci.-cu : 1, li.-cl
26	0	0 : m	5, ci, ci.-cu, h	5, ci, ci.-cu, h : 0
27	w	m N : m	0 : 0, st.-w	6, ci, cu, ci.-cu, cu.-s : 10, ci.-s, s, lu.-ha
28	0	m : w	10 : 10, ci.-s, sl.-r, hl	10, w : 6, ci.-cu, ci.-s, ci : 0
29	0 : m	sN, sP, sps, g-cur : sN, wP	10, ci.-s, sl.-r, st.-w	10, st.-w, oc.-shs : v, oc.-shs : v, cu.-s, sc
30	w : 0	s N, s P, sps, g-cur : m	v, cu.-s, ci.-s : 10, ci, ci.-cu, ci.-s, cu.-s	10, h.-shs : 7, ci, ci.-cu, cu.-s : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·3 on the 10th; and the lowest was 33°·1 on the 23rd.

The mean ,, was 42°·7, being 2°·6 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0in·274, being 0in·026 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3gr·1, being 0gr·2 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100). being 1 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 543 grains, being 1 grain *greater* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·6.

WIND.

The proportions were of N. 6, S. 6, W. 11, E. 5, and Calm 2. The greatest pressure in the month was 12lbs·0 on the square foot on the 22nd.

RAIN.

Fell on 9 days in the month, amounting to 0in·4, as measured in the simple cylinder gauge partly sunk below the ground; being 1in·4 *less* than the average fall of the preceding 48 years.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
May 1	..	30·082	57·8	31·4	44·4	36·1	99·5	22·4	55·8	52·6	8·3	16·4	3·0	− 5·6	NE	E	0·0	0·0	0·0	200	0.00
2	..	29·942	62·5	33·4	48·0	39·0	102·7	23·0	55·2	52·6	9·0	21·8	4·2	− 2·5	NE	E : NE	2·0	0·0	0·3	225	0·00
3	Full	29·735	69·0	39·7	54·0	44·0	108·0	39·0	55·7	53·5	10·0	21·6	3·0	+ 3·1	NE	NE : Calm	0·0	0·0	0·0	129	0·00
4	..	29·667	69·0	50·2	56·4	47·7	103·8	44·0	55·7	53·5	8·7	14·6	5·2	+ 5·1	NW	W	0·0	0·0	0·0	242	0·00
5	..	29·728	72·9	47·8	55·7	45·6	109·0	39·7	55·8	53·6	10·1	18·9	2·0	+ 4·1	WSW	N : NE	4·0	0·0	0·3	201	0·00
6	Greatest Dec. S. Perigee	29·866	70·5	41·4	54·4	45·8	107·6	..	56·1	53·9	8·6	19·8	4·2	+ 2·6	NE	SW : W	0·0	0·0	0·0	193	0·00
7	..	30·045	67·0	45·4	53·1	45·5	99·0	37·0	56·3	54·1	7·6	19·8	1·7	+ 1·2	W	NE : E	1·0	0·0	0·0	166	0·00
8	..	30·171	61·2	35·9	47·3	41·4	101·5	33·5	56·3	54·1	5·9	13·1	4·0	− 4·5	NE	SE : E	2·0	0·0	0·1	156	0·00
9	..	29·869	68·8	36·8	51·8	44·1	106·5	36·1	56·3	54·1	7·7	20·5	3·3	+ 0·2	E : NE	SE	0·0	0·0	0·0	158	0·00
10	Last Qr.	29·818	64·3	42·9	52·6	42·3	105·0	32·0	56·3	54·1	10·3	18·4	3·0	+ 1·2	SW	NE	0·0	0·0	0·0	198	0·00
11	..	29·827	63·7	42·2	50·7	40·6	98·9	40·0	56·6	54·4	10·1	18·3	3·8	− 0·6	WNW	SW	4·0	0·0	0·5	425	0·01
12	In Equator	29·543	57·0	47·1	51·4	49·8	70·6	47·1	56·7	54·5	1·6	3·6	0·8	+ 0·1	SW	SW	6·0	0·0	2·0	370	0·32
13	..	29·511	64·5	49·8	55·0	47·5	99·4	45·0	56·8	54·6	7·5	13·1	2·8	+ 3·6	WSW	SW	11·0	0·0	1·5	438	0·02
14	..	29·718	64·5	45·5	53·3	45·8	94·8	36·7	56·8	54·6	7·5	15·2	0·2	+ 1·5	SW	SW	4·5	0·0	0·8	350	0·04
15	..	29·667	62·6	49·9	53·6	50·5	85·3	49·5	56·8	54·6	3·1	9·1	1·3	+ 1·4	SW	SW	4·0	0·0	0·5	322	0·08
16	..	29·765	63·0	46·5	53·3	47·5	90·1	38·8	57·1	54·9	5·8	12·2	2·9	+ 0·7	SW	SW	3·0	0·0	0·3	228	0·02
17	New	29·665	62·9	47·7	53·5	48·5	87·5	40·8	57·3	55·1	5·0	8·2	4·2	+ 0·7	SW	SW	2·0	0·0	0·1	165	0·00
18	..	29·742	66·5	42·6	51·8	46·7	105·5	41·8	57·3	55·1	5·1	11·2	0·0	− 1·3	WSW : NE	NE	3·0	0·0	0·2	358	0·00
19	Greatest Declination N.	29·760	49·3	42·1	44·0	40·3	56·9	..	57·1	54·9	3·7	5·5	2·0	− 9·3	NE	NE	13·0	1·0	3·5	401	0·33
20	..	29·929	54·1	41·7	46·5	44·1	63·1	40·4	57·1	54·9	2·4	5·0	0·0	− 7·1	NE	NE	2·0	0·0	0·0	217	0·33
21	..	30·031	57·1	43·5	49·3	44·4	73·7	43·4	57·3	55·1	4·9	9·2	1·1	− 4·5	NE	NE	0·0	0·0	0·0	224	0·07
22	Apogee	29·860	55·8	36·9	45·3	39·4	90·4	..	57·1	54·9	5·9	9·6	3·1	− 8·8	NE	NE	1·0	0·0	0·0	228	0·00
23	..	29·703	62·1	35·7	47·8	40·4	106·0	26·8	57·1	54·9	7·4	16·5	3·0	− 6·5	NE	SE : NE	2·0	0·0	0·0	152	0·00
24	..	29·729	64·7	36·2	50·3	42·1	105·5	26·0	56·6	54·4	8·2	18·8	4·0	− 4·1	NE	N	1·0	0·0	0·0	265	0·00
25	First Qr.	29·818	60·8	40·8	48·7	40·8	97·2	33·0	56·3	54·1	7·9	16·3	3·7	− 5·9	N : NE	NE	4·0	0·0	0·6	242	0·00
26	In Equator	30·039	63·3	35·9	47·7	40·7	106·7	30·0	56·1	52·9	7·0	20·9	4·0	− 7·0	NNE	NNE	0·0	0·0	0·0	142	0·00
27	..	30·108	71·2	38·2	55·5	46·8	95·0	29·2	56·3	54·1	8·7	18·4	3·6	+ 0·6	SW	NW	0·0	0·0	0·0	174	0·00
28	..	30·105	74·2	46·1	59·4	51·5	107·7	45·0	56·3	54·1	7·9	18·2	2·8	+ 4·2	WSW	W	0·0	0·0	0·0	190	0·00
29	..	30·047	79·7	49·7	63·5	55·9	114·4	..	56·8	54·5	7·6	19·6	1·0	+ 8·1	WSW	W	1·0	0·0	0·0	199	0·00
30	..	29·997	75·5	53·7	62·5	57·0	98·0	53·4	57·3	55·1	5·5	11·2	2·4	+ 6·8	W	W : NW	1·5	0·0	0·0	255	0·00
31	..	30·069	60·2	48·3	52·1	49·3	77·0	48·0	59·6	57·4	2·8	6·8	1·0	− 4·0	NE : E	NE : SE	0·0	0·0	0·0	183	0·02
Means	..	29·857	64·4	42·7	52·0	45·2	95·7	37·9	56·6	54·4	6·8	14·6	2·6	− 0·9	...	....	..	..	..	Sum 7396	Sum 1·25

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·116 on the 1st; the first minimum in the month was 29in·656 on the 4th.
The absolute maximum ,, was 30in·228 on the 8th; the second minimum ,, was 29in·800 on the 9th.
The third maximum ,, was 29in·896 on the 11th; the absolute minimum ,, was 29in·447 on the 12th.
The fourth maximum ,, was 29in·748 on the 14th; the fourth minimum ,, was 29in·634 on the 15th.
The fifth maximum ,, was 29in·776 on the 16th; the fifth minimam ,, was 29in·663 on the 17th.
The sixth maximum ,, was 30in·039 on the 21st; the sixth minimum ,, was 29in·679 on the 23rd.
The seventh maximum ,, was 30in·137 on the 28th; the seventh minimum ,, was 29in·963 on the 30th.
The eighth maximum ,, was 30in·120 on the 31st.
The range in the month was 0in·781.
The mean for the month was 29in·857, being 0in·090 *higher* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 79°·7 on the 29th; the lowest was 31°·4 on the 1st.
The range ,, was 48°·3.
The mean ,, of all the highest daily readings was 64°·4, being 0°·1 *lower* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 42°·7, being 1°·6 *lower* than the average of the preceding 22 years.
The mean daily range was 21°·7, being 1°·5 *greater* than the average of the preceding 22 years.
The mean for the month was 52°·0, being 0°·9 *lower* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
May 1	w	v : o	2, ci, ci.-cu	3, ci,ci.-cu,cu : 1, ci, cu : o
2	m	w : s	1, ci, ci.-s	o : 4, ci, ci.-s : 6, li.-cl
3	w	w : o	1, li.-cl	o : v, li.-cl : 2, li.-cl
4	o	o : w	10	10 : 8,ci.-s,cu.-s,ci,ci.-cu : 1
5	m	w : w	3, ci, ci.-cu, ci.-s	3,ci, cu, ci.-cu : 10, th.-r, v : 5, ci, ci.-s
6	v	o : w	2, ci, ci.-cu	8, ci, ci.-cu, ci.-s, cu.-s : 2, ci, ci.-s
7	w : s : w	w : o : w	2, ci, ci.-s : 10, ci.-s	10 : 1, ci, ci.-cu : o
8	w	w : s	4, ci, ci.-cu, ci.-s	o : o
9	w	o	6, ci, ci.-cu, h	4, ci, ci.-cu, h : 6, ci, ci.-cu : o
10	o	o	o : 10	9, cu.-s, ci.-s, h : 10, cu.-s, ci.-s
11	o	o	7, ci, ci.-s	10, ci.-s : 10, sl.-r
12			shs.-r : 10, sl.-r	10, sl.-r, w : 10, ci.-s, c.-h.-r : 10
13	o	o : s N : w	10. ci.-s, ci, ci.-cu, sc, w	9,ci,ci.-cu,ci.-s,cu.-s,st.-w : 4,ci.-s,ci.-cu,v,r : v,ci.-cu,ci.-s,ci
14	w : w	o : w	o. v : 10, ci.-s	7,ci.-cu,ci.-s,cu.-s : 10, ci.-s : 10, sc, r
15	o	m N : w	10, ci.-s, shs.-r	10, oc.-r : 10, ci.-s, cu.-s : o
16	o : s N, sps	m : o : m	10, ci.-cu, ci.-s, oc.-r	10, ci.-s, cu.-s, ci.-cu, ci : 2, ci, ci.-s
17	w	o : m	10, ci.-s	10 : 1, ci, ci.-s
18	w	w : m	10, ci.-cu, ci.-s	10, ci.-cu, ci.-s, cu.-s : 10
19	w : s	o	10, st.-w, c.-h.-r	10, st.-w : 10, r
20	o : s N, sps	w : w N : s N	10, h.-r	10, sl.-r : 10, shs.-r
21	o	o : w	10, shs.-r : 10, ci.-s	10 : 1, ci, ci.-s
22	w	w	10	10, ci.-s, cu.-s, ci.-cu : 7, ci, ci.-cu, cu, cu.-s
23	w	w : m	8, cu, cu.-s, ci.-cu, ci	6, ci, ci.-cu, cu, ci.-s : o, ms
24	o	o : w	1, ci, ci.-cu, cu.-s	1,ci.-s,ci.-cu,ci,h : 10 : 10, ci.-cu, ci.-s
25	w	m : m	10	9, ci, cu, cu.-s : 3, s, ci, li.-cl, sl.-r, m
26	m	o	10, ci.-cu, ci.-s	10, ci.-s, cu.-s : 7, cu, ci,ci.-cu : o, m
27	o	o : v	o, h	4, ci.-cu, ci, h : 10,ci.-cu,ci.-s,cu.-s : v, ci.-s
28	w	w	10, ci.-s : 1, li.-cl, h	2, ci, h : li.-cl, h : o, h
29	m	o : w	1, ci, ci.-s, h	2, ci, ci.-cu, h : 1, ci, ci.-s
30	o	o	10, ci.-s	10, ci.-s : 10, ci.-s, cu.-s, sl.-r
31	o	o	10 : 10, r	10 : 10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·8 on the 30th; and the lowest was 34°·9 on the 1st.

The mean ,, was 45°·2, being 0°·4 *lower* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·302, being 0^{in}·001 *less* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·4, being 0^{gr}·1 *less* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 540 grains, being 2 grains *greater* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·2.

WIND.

The proportions were of N. 8, S. 4, W. 10, E. 9., and Calm 0. The greatest pressure in the month was 13^{lbs}·0 on the square foot on the 19th.

RAIN.

Fell on 10 days in the month, amounting to 1^{in}·3, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·8 *less* than the average fall of the preceding 48 years.

ELECTRICITY.—On May 12, the insulating lamp was not burning.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h, A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h A.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
June 1	Full	30·081	68·1	42·1	52·4	45·9	111·7	40·0	60·6	58·4	6·5	16·2	2·3	— 4·0	SE	SE	0·0	0·0	0·0	140	0·0
2	Greatest Declination S.	29·930	75·5	43·1	59·4	48·2	115·5	38·6	60·7	58·5	11·2	25·0	7·4	+ 2·8	SE	SE	0·0	0·0	0·0	41	0·0
3	Perigee	29·818	84·0	46·9	66·5	53·5	124·5	38·5	61·8	59·6	13·0	26·9	6·3	+ 9·7	Calm : WSW	W	1·0	0·0	0·0	110	0·0
4	..	29·828	73·6	55·9	62·1	45·8	103·9	52·9	62·6	60·4	16·3	23·6	8·9	+ 5·0	NE	NW : W	2·5	0·0	0·1	..	0·0
5	..	29·728	67·1	45·4	54·3	51·8	96·5	36·1	62·6	60·4	2·5	11·8	0·8	— 2·8	WSW	SW	6·0	0·0	0·8	..	0·2
6	..	29·277	67·6	50·0	53·9	49·2	102·4	50·0	62·8	60·6	4·7	13·7	2·1	— 3·3	SW	WSW	10·0	0·0	0·6	..	0·8
7	..	29·331	64·7	49·4	56·5	50·7	96·7	44·0	62·8	60·6	5·8	11·3	2·5	— 0·8	WSW	SW	6·0	0·0	1·0	..	0·0
8	Last Quarter : In Equator.	29·399	63·5	49·2	53·6	45·6	98·2	49·0	62·8	60·6	8·0	14·4	3·4	— 3·8	SW	SW	6·0	0·0	0·8	..	0·0
9	..	29·635	65·0	46·0	54·6	46·8	100·6	40·7	62·8	60·6	7·8	17·1	1·5	— 2·9	SW	SW : SE	2·0	0·0	0·2	..	0·0
10	..	29·336	68·3	51·0	57·0	51·3	98·0	46·7	62·7	60·5	5·7	14·4	3·0	— 0·7	SE	SW	6·0	0·0	0·6	..	0·0
11	..	29·412	64·6	50·0	54·4	45·8	105·5	46·6	62·6	60·4	8·6	15·4	5·4	— 3·6	SW	SSE	4·0	0·0	1·0	..	0·0
12	..	29·357	63·0	47·2	51·6	45·0	97·8	47·0	61·7	59·5	6·6	14·8	1·5	— 6·7	SW	SE : N	1·0	0·0	0·0	..	0·3
13	..	29·641	67·0	45·7	54·9	49·8	99·4	39·6	62·3	60·1	5·1	14·2	1·6	— 3·6	W	W	2·0	0·0	0·1	..	0·2
14	..	29·864	68·0	45·4	57·1	51·4	91·2	38·8	62·1	59·9	5·7	15·7	3·6	— 1·7	WSW	WSW	0·0	0·0	0·0	..	0·0
15	Greatest Declination N.	29·842	69·0	55·3	60·1	50·5	99·5	51·4	62·1	59·9	9·6	14·6	5·5	+ 1·1	W	W	0·0	0·0	0·0	..	0·0
16	New	29·788	66·3	50·8	57·3	54·8	83·3	50·2	62·7	60·5	2·5	6·3	0·0	— 2·0	SW	SW	0·0	0·0	0·0	..	0·0
17	..	29·722	72·0	53·5	59·9	53·5	104·8	50·3	62·8	60·6	6·4	18·5	0·8	+ 0·5	W	WSW	0·0	0·0	0·0	..	0·1
18	Apogee	29·648	72·7	48·9	59·4	50·1	112·3	43·8	63·1	60·9	9·3	17·3	1·4	— 0·1	SW	S : E	0·0	0·0	0·0	..	0·0
19	..	29·420	69·5	53·7	57·3	52·2	100·5	..	63·1	60·9	5·1	14·6	0·0	— 2·6	E : NE	SW : E	0·0	0·0	0·0	..	1·4
20	..	29·651	72·0	54·3	60·3	53·6	100·0	50·0	63·2	61·0	6·7	11·3	2·9	+ 0·5	NNE	NW	0·0	0·0	0·0	..	0·0
21	..	29·886	74·6	50·7	60·6	52·7	112·0	44·6	63·3	61·1	7·9	17·0	1·4	+ 0·7	W	WSW	0·0	0·0	0·0	..	0·0
22	..	29·891	69·8	55·1	59·7	56·1	88·4	53·4	63·3	61·1	3·6	9·4	1·1	— 0·3	WSW	SW	0·0	0·0	0·0	..	0·0
23	In Equator	29·965	76·5	56·8	65·1	52·1	121·5	51·5	63·7	61·5	13·0	22·3	0·6	+ 4·9	W	W	0·0	0·0	0·0	..	0·0
24	First Qr.	29·910	76·4	56·4	63·1	56·8	115·8	56·2	65·7	63·5	6·3	17·7	0·4	+ 2·7	Calm	NE : SE	0·0	0·0	0·0	92	0·45
25	..	29·964	67·8	57·8	62·0	51·5	106·0	54·5	65·8	63·6	10·5	14·2	2·7	+ 1·7	N	NNW	0·0	0·0	0·0	71	0·00
26	..	29·975	76·0	49·4	60·1	50·3	115·2	49·0	67·1	64·9	9·8	23·4	4·2	— 0·7	N	W	0·0	0·0	0·0	247	0·02
27	..	29·795	70·9	51·4	57·7	50·6	108·0	48·1	66·9	64·6	7·1	18·9	3·6	— 3·3	SW	W	2·0	0·0	0·0	275	0·00
28	..	29·794	69·5	47·2	57·3	49·0	100·7	46·2	66·9	64·7	8·3	16·4	5·0	— 4·0	W	SW	0·0	0·0	0·0	165	0·00
29	Greatest Declination S.	29·852	72·0	48·0	57·4	46·5	110·0	46·3	67·1	64·9	10·9	18·7	5·2	— 4·1	WSW	WSW	0·0	0·0	0·0	195	0·00
30	..	30·068	69·2	46·7	56·9	46·0	103·8	46·7	66·4	64·2	10·9	18·9	5·2	— 4·6	WSW	WSW	0·0	0·0	0·0	172	0·00
Means	..	29·727	70·1	50·1	58·1	50·2	104·1	46·6	63·5	61·3	7·8	16·5	3·0	— 0·9	...	...	..	..	..	Sum 10 days 1508	Sum 3·94

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·650 on the 9th; the second maximum was 29in·447 on the 11th; the third maximum was 29in·881 on the 15th; the fourth maximum was 29in·974 on the 23rd; the fifth maximum was 30in·006 on the 26th; the first minimum in the month was 29in·265 on the 6th; the absolute minimum was 29in·247 on the 10th; the third minimum was 29in·323 on the 12th; the fourth minimum was 29in·383 on the 19th; the fifth minimum was 29in·891 on the 24th; the sixth minimum was 29in·785 on the 27th.

The highest reading took place on the 30th at midnight, and was 30in·155, the barometer still increasing.

The range in the month was 0in·908.

The mean for the month was 29in·727, being 0in·063 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 84°·0 on the 3rd; the lowest was 42°·1 on the 1st.

The range was 41°·9.

The mean of all the highest daily readings was 70°·1, being 0°·9 *lower* than the average of the preceding 22 years.

The mean of all the lowest daily readings was 50°·1, being 0°·1 *lower* than the average of the preceding 22 years.

The mean daily range was 20°·0, being 0°·8 *less* than the average of the preceding 22 years.

The mean for the month was 58°·1, being 1°·0 *lower* than the average of the preceding 22 years.

ROBINSON'S ANEMOMETER.—From June 4 to 23, this instrument was in the hands of its maker for repair.

MONTH and DAY, 1863.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
June 1	o	o	7, ci.-cu, ci.-s, ci	2, ci, ci.-cu, ci.-s : o
2	o	o	o : o	o : o
3	o	o	7, ci, ci.-s	3,ci,ci.-cu,ci.-s : 8,ci,ci.-s,ci.-cu,cu.-s : 10,ci.-s,cu.-s
4	o	w : o	10, ci.-s : 4, ci, ci.-s	8,ci,ci.-s,ci.-cu,h : 10, ci.-s : o
5	w	o	8, ci, ci.-cu, ci.-s, cu.-s	10, ci.-s, h.-r : 10, c.-h.-r
6	o	o	10, c.-h.-r : 10, r	5,ci,ci.-cu,ci.-s : 10, oc.-shs : 3, ci, ci.-s, m
7			9, v, fr.-sqs	10,ci.-cu,ci.-s,cu.-s,oc.-shs : 10, ci.-s, cu.-s
8	m	s N,sP,g-cur,sps : o	9, ci.-cu, cu, ci.-s, cu.-s, oc.-shs	3,cu,ci,ci.-s,cu.-s,h.-shs : 9, v : o
9	o : s N,sP,sps,g-cur	s : o	4, ci : 10,cu,ci,ci.-s,ci.-cu,cu.-s	9,ci,cu,ci.-s,sl.-r : 3,cu.-s,ci.-cu,ci: 7, s, ci.-s
10	o	o	10, ci.-s, shs.-r : 10, ci.-s	10, ci.-s : 9,ci.-cu,ci.-s,ci : 10, w, li.-shs
11	o	o	10 : 4, ci, ci.-cu, th.-r : 9, ci.-s, ci, ci.-cu	9, cu.-s, ci.-s, ci.-cu, ci : 10, sl.-r
12	o	m : o	10, h.-r : 6, ci, ci.-s, ci.-cu, cu.-s	10, cu,ci,ci.-s, cu.-s, h.-r, t : 10, ci.-s, shs.-r
13	o	o:sN,sps,g-cur:sN,sps,g-cur	10, ci.-s : 10, ci, ci.-cu, ci.-s	9,ci.-cu,ci.-s,cu.-s,ci : 10, h.-r : 10, h.-r
14	o	o	10, sl.-r : 10, ci.-cu, ci.-s	10, oc.-shs : 1, ci.-s, ci.-cu, ci
15	o : m	w : m	10, ci.-cu, ci.-s : 10, ci.-s	10, ci.-s, ci.-cu : 10, ci.-s : 3, li.-cl
16	w	v : m	10, ci, ci.-s : 10, ci.-s	10, ci.-s, cu.-s, shs.-r : 10, th.-r
17	m : o	o : w : o	10, h.-shs : 10, sl.-r	10,ci.-cu,ci.-s,ci : 3, cu, ci.-cu, ci : 2, ci, ci.-s
18	w	w : s, sps	1, ci.-s : 2, ci, cu, ci.-cu, ci.-s	5,ci,ci.-cu,ci.-s,cu.-s : 10,li.-cl,sl.-r : 5, ci, ci.-s
19	o : s	o : m	10, h.-r : 10, c.-h.-r	10, ci.-cu, sl.-r : 7,cu,ci.-cu,shs.-r : 10,ci.-s,cu.-s
20	o : w	o	10, ci.-s, ci	10, ci, ci.-cu, ci.-s : o, h
21	w	o	4, ci, ci.-s, li.-cl	3, ci : 10, ci.-s
22	o	o	10, m.-r : 10, ci.-s, m.-r	10. ci.-s : 8, s, ci.-s, li.-cl
23	o : w	o	10, ci, ci.-cu, cu.-s : 3, ci, ci.-cu	2, ci, ci.-cu, ci.-s : 10, ci.-s
24	o : w	o : s N,sP, sps, g-cur	10, ci.-s : 10, ci.-s	6, ci, ci.-cu, cu, ci.-s : 9, ci, ci.-s, cu.-s : 10, ci.-s, t.-s, l, t, h.-r
25	o	o	10, l, t : 10, ci.-s, sl.-r	2, ci, ci.-cu, h : 9,cu.-s,ci.-cu,ci,h : 2, ci.-cu, ci
26	o	o	1, ci, ci.-cu, h : o, h	4,ci,cu,ci.-cu : 10,ci.-s,ci.-cu,ci : 10,ci.-cu,ci.-s,s,oc-r
27	o	o	10 : 10, sl.-r	10, sl.-r : 4,ci.-cu,cu.-s,ci : o
28	o	o	10, ci.-s, cu.-s	9, ci, ci.-cu, ci.-s, cu.-s : 8, ci.-cu, ci.-s, cu.-s
29	o	o	1, li.-cl : 9, ci.-cu, cu.-s, ci	6, cu.-s, ci.-cu, ci : 1, ci.-s, li.-shs
30	o	o	1, ci : 7, ci, ci.-cu, ci.-s	10, ci.-s, ci, ci.-cu : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·1 on the 24th ; and the lowest was 44°·5 on the 4th.

The mean ,, was 50°·2, being 0°·7 *lower* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·364 being 0^{in}·009 *less* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·1, being 0^{gr}·1 *less* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 75 (that of Saturation being represented by 100), being the *same* as the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 531 grains, being the *same* as the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·2.

WIND.

The proportions were of N. 4, S. 8, W. 14, E. 4. and Calm o. The greatest pressure in the month was 10^{lbs}·0 on the square foot on the 6th.

RAIN.

Fell on 14 days in the month, amounting to 3^{in}·9, as measured in the simple cylinder gauge partly sunk below the ground ; being 2^{in}·0 *greater* than the average fall of the preceding 48 years.

ELECTRICITY.

On June 7, the insulating lamp was not burning.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32 Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day.	Robinson's. Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
July 1	Full: Perigee.	30·095	72·9	45·5	60·2	49·1	111·0	..	66·4	64·2	11·1	21·4	6·6	− 1·3	Calm : S	SW : SSE	0·0	0·0	0·0	206	0·00
2	..	29·860	72·0	55·1	61·4	53·7	103·5	47·9	66·4	64·2	7·7	18·4	4·9	0·0	WSW	WSW	6·0	0·0	0·3	328	0·00
3	..	30·028	74·2	52·6	62·2	51·2	96·6	49·7	65·5	64·3	11·0	18·5	4·0	+ 0·8	W : NW	NW : N	0·0	0·0	0·0	124	0·00
4	..	30·111	72·5	50·9	60·4	51·0	107·2	..	66·8	64·6	9·4	17·6	1·4	− 1·1	NNE	NE	0·0	0·0	0·0	59	0·00
5	In Equator	30·150	76·6	52·3	62·8	52·1	99·0	43·8	66·8	64·6	10·7	22·4	2·8	+ 1·2	NE	NE : E	0·0	0·0	0·0	106	0·00
6	..	30·083	77·6	52·5	64·1	55·1	117·0	44·6	67·0	64·8	9·0	21·4	3·4	+ 2·4	SE	SE : SW	1·0	0·0	0·0	154	0·00
7	Last Qr.	29·890	82·5	53·1	68·3	59·0	120·0	44·2	67·1	64·9	9·3	21·6	4·0	+ 6·5	SW	W	1·0	0·0	0·0	218	0·00
8	..	30·034	73·7	52·1	62·3	55·6	109·8	43·1	67·6	65·4	6·7	16·6	4·4	+ 0·6	WSW	NW	0·0	0·0	0·0	130	0·00
9	..	30·083	81·0	54·7	65·7	54·9	121·6	45·5	68·6	66·4	10·8	24·5	2·8	+ 4·2	NNE	NNE : SE	0·0	0·0	0·0	61	0·00
10	..	30·198	83·5	51·1	66·4	51·0	124·0	50·4	69·0	66·8	15·4	32·6	3·6	+ 4·9	Calm: NE	NE : SE	0·0	0·0	0·0	87	0·00
11	..	30·212	79·8	51·2	65·3	55·1	115·0	42·3	69·7	67·5	10·2	23·8	6·5	+ 3·7	NE	SE	0·0	0·0	0·0	47	0·00
12	Greatest [illegible] S.	30·184	83·9	51·4	66·9	53·9	124·5	44·0	70·1	67·9	13·0	29·3	5·0	+ 5·2	Calm	NE : ESE	0·0	0·0	0·0	104	0·00
13	..	30·288	75·0	56·0	62·6	52·1	107·0	53·2	70·1	67·9	10·5	22·8	4·0	+ 0·8	NE	NE : ESE	0·0	0·0	0·0	74	0·00
14	..	30·197	78·5	46·0	62·3	52·7	110·6	37·7	70·2	68·0	9·6	25·0	1·1	+ 0·6	Calm	Calm	0·0	0·0	0·0	61	0·00
15	Apogee : N.S.	30·018	86·0	48·9	66·8	55·6	116·3	39·6	70·2	68·0	11·2	28·8	0·6	+ 5·1	Calm	N	0·0	0·0	0·0	130	0·00
16	..	30·038	67·3	52·7	58·8	46·9	94·0	45·4	70·0	67·8	11·9	17·5	5·1	− 2·9	NE	NE : SE	0·0	0·0	0·0	118	0·00
17	..	29·811	73·8	42·5	56·5	47·9	109·7	..	69·9	67·7	8·6	21·8	5·9	− 5·2	SW	NW	0·0	0·0	0·0	264	0·00
18	..	29·665	55·5	44·8	53·1	42·8	94·0	40·2	68·8	66·6	10·3	18·8	1·3	− 8·6	W : NW	NW : N	2·0	0·0	0·0	167	0·00
19	..	29·786	74·0	38·7	57·0	44·6	108·0	28·4	68·1	65·9	12·4	27·9	8·4	− 4·7	SW	SW	0·0	0·0	0·0	166	0·00
20	In Equator	29·626	70·8	48·1	57·1	46·4	115·0	40·0	67·1	64·9	10·7	23·8	2·9	− 4·5	NW	Calm	0·0	0·0	0·0	96	0·00
21	..	29·568	64·6	46·6	55·6	55·0	70·3	36·2	67·0	64·8	0·6	5·5	0·0	− 5·9	SW	S : SW	2·0	0·0	0·0	238	0·42
22	..	29·441	67·5	54·3	58·0	53·9	94·2	48·5	66·1	63·9	4·1	11·4	0·8	− 3·5	SW	W	7·0	0·0	0·6	287	0·33
23	First Qr.	29·738	70·5	48·1	58·9	49·6	112·2	41·0	65·3	63·1	9·3	19·3	1·8	− 2·6	SW	W : NNW	2·0	0·0	0·3	237	0·00
24	..	29·944	67·7	44·1	56·1	48·5	95·0	33·6	64·9	62·7	7·6	17·6	1·3	− 5·5	W	W	1·0	0·0	0·0	264	0·00
25	..	29·791	67·8	51·1	58·1	54·3	93·8	44·7	64·6	62·4	3·8	10·3	1·0	− 3·7	WSW	NW : NE	2·5	0·0	0·1	168	0·13
26	..	30·008	69·7	46·0	54·5	47·1	99·8	37·0	64·3	62·1	7·4	16·7	2·5	− 7·6	N	N : Calm	0·0	0·0	0·0	90	0·00
27	Greatest Declination S.	30·029	75·0	45·8	60·0	51·7	100·0	37·2	64·6	62·4	8·3	20·7	2·4	− 2·3	SW	S	0·0	0·0	0·0	72	0·00
28	..	29·893	78·0	47·2	62·6	54·6	120·0	40·0	64·8	62·6	8·0	22·8	1·4	+ 0·1	S	SW	0·0	0·0	0·0	85	0·00
29	..	29·864	77·4	50·5	63·7	56·7	106·0	40·0	64·8	62·6	7·0	21·3	1·9	+ 1·2	Calm	N : NE	1·5	0·0	0·0	144	0·00
30	Perigee : Full.	30·059	73·1	52·4	61·3	50·9	114·0	47·0	65·5	63·3	10·4	22·5	0·0	− 1·2	NE	NE : ESE	0·0	0·0	0·0	113	0·00
31	..	30·111	69·6	44·1	56·7	49·5	115·0	34·0	65·6	63·4	7·2	19·6	2·2	− 5·8	E	SE	2·0	0·0	0·2	180	0·00
Means	..	29·961	74·3	49·4	60·8	51·7	107·2	42·1	67 2	65·0	9·1	20·7	3·0	− 0·9	...	...	..	..	..	Sum 4578	Sum 0·88

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·168 on the 1st; the first minimum in the month was 29in·837 on the 2nd.
The second maximum ,, was 30in·165 on the 5th; the second minimum ,, was 29in·870 on the 7th.
The third maximum ,, was 30in·236 on the 11th; the third minimum ,, was 30in·191 on the 11th.
The absolute maximum ,, was 30in·305 on the 13th; the fourth minimum ,, was 29in·968 on the 15th.
The fifth maximum ,, was 30in·053 on the 16th; the fifth minimum ,, was 29in·619 on the 18th.
The sixth maximum ,, was 29in·832 on the 19th; the sixth minimum ,, was 29in·606 on the 20th.
The seventh maximum ,, was 29in·638 on the 21st; the absolute minimum ,, was 29in·320 on the 22nd.
The eighth maximum ,, was 29in·970 on the 24th; the eighth minimum ,, was 29in·772 on the 25th.
The ninth maximum ,, was 30in·057 on the 27th; the ninth minimum ,, was 29in·845 on the 29th.
The tenth maximum ,, was 30in·143 on the 31st.
The range in the month was 0in·985.
The mean for the month was 29in·961, being 0in·167 *higher* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 86°·0 on the 15th; the lowest was 38°·7 on the 19th.
The range ,, was 47°·3.
The mean ,, of all the highest daily readings was 74°·3, being 0°·7 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 49°·4, being 3°·7 *lower* than the average of the preceding 22 years.
The mean daily range was 24°·9, being 4°·4 *greater* than the average of the preceding 22 years.
The mean for the month was 60°·8, being 0°·9 *lower* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
July 1	o	o : w : o	o : 1, ci.-cu, ci.-s, ci	3, ci, ci.-s, ci.-cu : o
2	o	o : w	o : 10, cu, ci, ci.-cu, ci.-s	5, ci.-cu, ci, cu : o
3	o : s	w : o	o : 8, cu.-s, ci.-cu, ci.-s, h	9, ci.-cu, ci.-s, ci : 10, ci.-cu, ci.-s, s, v
4	m : w	w : o	10 : 10, ci.-s	9, v, ci.-s, ci, ci.-cu : 10, ci.-cu
5	w	o : w	o, h	5, cu.-s, s, h : o
6	o : w	w : m	o : 1, ci.-cu	o : o
7	w	o : m	5, ci, ci.-cu : 4, ci, ci.-s	o : 10
8	o	o : m : o	o : 10, ci.-s	9, ci.-cu, ci.-s, ci : 1, ci : 10, v
9	o : w	o : m	10, v : o	5, ci, ci.-cu, ci.-s, cu.-s : 3, ci, s, li.-cl
10	w	w	o : o	o : 2, ci, ci.-cu, cu.-s : o
11	m : w	o : w	1, ci, h : 8, ci, ci.-s, ci.-cu	5, ci.-cu, ci.-s, ci : 9, ci.-s, ci.-cu : 1, li.-cl
12	w	w	o	3, ci, ci.-cu : o
13	o : w	w : o	10 : 10, ci.-s	10, ci.-s : 10, li.-cl
14	m : o	w : o	o, h : o, h	o, h : o, h
15	w : o	w : o	o, h, f : o, h	o, h : o, h : 2, ci.-s, ci, h
16	o	o : w	o, h : 10, ci.-s, cu.-s	10, ci.-s, ci.-cu, cu.-s : 3, ci.-s, li.-cl
17	o	m N : o	6, ci.-cu, ci, ci.-s : 10, ci.-s	10, ci.-s : 6, ci.-cu, cu.-s, ci, h : o, h
18	w P, w N	s N : o	5, ci, ci.-cu, ci.-s : 10, ci.-s	10, ci.-s, sl.-r : 4, ci.-cu, ci, h : o
19	o	o	o, h	1, ci.-cu, cu.-s : 10
20	w : o	o	10 : 8, ci, ci.-s, ci.-cu, h	10, ci, ci.-cu, ci.-s, h : 7, s, ci, li.-cl
21	m : w	o	10, ci, ci.-s, ci.-cu, h : 10, th.-r	10, h.-r : 10, c.-h.-r
22	o	s, sps : o	10 : 10, ci.-s, ci.-cu, h.-r	10, h.-sqs : 10, v, ci.-s : v, li.-cl
23	w : m	o	o : 5, ci.-s, ci, ci.-cu	8, cu.-s, ci, cu : 5, ci, ci.-cu : 2, ci.-cu, ci.-s
24	o : w	o : w	o : 2, ci, ci.-cu, h	10, ci.-cu, ci.-s, cu.-s, ci : o
25	o : w	m : o	10, ci.-cu, ci.-s, cu.-s : 10, ci, ci.-cu	10, ci.-s, oc.-r : 10, h.-r
26	m	o	10, v	10 : o
27	o	o	o : o, h	1, ci, ci.-cu : 8, ci.-s, ci.-cu : o, ms
28	o	o : m	8, ci, ci.-s : 9, ci.-s, ci, h	1, cu.-s : o : o, h, ms
29	o : w	o : w : o	10, ci, ci.-cu, cu.-s, ci.-s, h	7, cu, ci.-cu, cu-s, h : 8, ci.-s, ci : 10, ci.-s
30	o : v	w	7, ci.-cu, ci.-s : 8, ci.-cu, cu : o, h	5, ci.-cu, ci.-s, ci : o
31	v	w : m	o : 3, cu.-s, ci.-cu, ci	1, ci.-cu, ci, ci.-s, cu.-s : 4, ci, ci.-s : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·5 on the 7th; and the lowest was 42°·2 on the 18th.

The mean ,, was 51°·7, being 2°·1 *lower* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0in·384, being 0in·032 *less* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4gr·3, being 0gr·3, *less* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 72 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 532 grains, being 4 grains *greater* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 5·0.

WIND.

The proportions were of N. 8, S. 6, W. 8, E. 6, and Calm 3. The greatest pressure in the month was 7lbs·0 on the square foot on the 22nd.

RAIN.

Fell on 3 days in the month, amounting to 0in·9, as measured in the simple cylinder gauge partly sunk below the ground; being 1in·8 *less* than the average fall of the preceding 48 years.

MONTH and DAY, 1893.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahr.)	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Sun, as shown by a Self-Registering Thermometer placed at 9 P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer placed at 9 P.M. preceding.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Wind as deduced from Anemometers. Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Aug. 1	..	29·631	73·3	48·3	60·4	52·3	110·0	41·5	65·6	63·4	8·1	22·1	1·5	— 2·1	SE	E	2·0	0·0	0·3	195	0·00
2	In Equator	29·863	82·[illegible]	54·1	64·8	58·2	115·5	44·3	65·7	63·5	6·6	13·6	0·0	+ 2·5	E	SW	2·0	0·0	0·2	182	0·00
3	..	29·866	82·[illegible]	55·7	64·1	57·4	99·3	47·9	65·8	63·6	6·7	11·9	1·3	+ 1·9	SW	SW	3·5	0·0	0·4	281	0·00
4	..	29·741	75·8	54·7	64·2	58·3	111·7	41·2	66·1	63·9	5·9	14·9	0·0	+ 2·1	SW	WSW	4·0	0·0	0·7	244	0·00
5	..	29·730	74·3	56·2	62·6	55·8	94·0	51·9	66·1	63·9	6·8	19·9	1·3	+ 0·6	WSW	SW	2·0	0·0	0·1	250	0·00
6	Last Q.	29·734	72·5	57·7	62·4	57·8	99·0	52·2	66·6	64·4	4·6	12·4	0·4	+ 0·4	SW	SW	3·5	0·0	0·8	339	0·15
7	..	29·922	80·0	60·8	68·6	62·7	111·0	54·0	..	..	5·9	16·3	3·2	+ 6·6	SW	SW	0·0	0·0	0·0	275	0·00
8	..	29·950	80·0	62·7	68·4	61·7	113·0	57·5	..	..	6·7	17·2	2·7	+ 6·4	SW	SW	0·0	0·0	0·0	247	0·00
9	[illegible]	29·967	84·9	56·3	67·6	62·2	115·2	47·0	67·8	65·6	5·4	13·6	0·0	+ 5·7	SW	SW	0·0	0·0	0·0	191	0·00
10	..	29·917	83·2	60·0	68·8	62·5	117·7	51·5	68·6	66·4	8·3	21·4	3·4	+ 7·0	WSW	SW	0·0	0·0	0·0	263	0·00
11	Apogee	29·864	79·0	57·5	66·2	53·3	117·0	48·4	69·1	66·9	13·0	24·5	5·1	+ 4·6	SW	W : N	1·0	0·0	0·0	194	0·00
12	..	29·8[illegible]	75·1	50·1	61·9	48·7	117·0	41·3	68·6	66·4	13·2	26·1	6·1	+ 0·3	NE	NE : ESE	0·0	0·0	0·0	118	0·00
13	..	29·783	77·0	50·0	63·[illegible]	53·1	115·0	41·5	68·9	66·7	10·3	20·6	4·8	+ 1·9	SE	ENE	0·0	0·0	0·0	203	0·00
14	New	29·852	73·1	55·5	63·2	52·9	109·5	46·2	68·9	66·7	10·3	19·1	1·2	+ 1·7	NE	E : SW	3·0	0·0	0·3	218	0·00
15	..	29·677	81·0	53·7	66·4	55·3	110·2	49·8	69·1	66·9	11·1	22·8	0·0	+ 5·0	SW	SW	6·0	0·0	0·6	361	0·00
16	In Equator	29·669	76·0	58·5	66·2	55·0	115·0	50·0	67·6	65·4	12·3	19·8	4·9	+ 4·8	SW	SW	5·0	0·0	0·8	316	0·00
17	..	29·[illegible]	74·0	52·1	59·6	47·7	112·8	47·1	68·1	65·9	11·9	23·9	4·4	— 1·7	SW	W	5·0	0·0	0·3	304	0·10
18	..	29·674	65·8	49·2	56·5	47·2	98·0	47·5	67·6	65·4	9·3	14·4	4·2	— 4·0	W	NW	4·0	0·0	0·8	297	0·02
19	..	29·663	62·0	51·3	53·6	48·9	83·3	42·5	66·6	64·4	4·7	9·8	0·5	— 7·3	W	SW : NW	5·0	0·0	0·3	310	0·17
20	..	29·[illegible]	63·3	50·5	55·3	45·7	92·8	44·5	65·9	63·7	9·6	15·0	4·8	— 5·5	NNW	NNW	4·0	0·0	0·5	262	0·01
21	..	29·987	66·0	46·0	55·8	46·2	90·2	37·2	65·6	63·4	9·6	16·9	1·1	— 4·8	N	NW	1·0	0·0	0·0	165	0·00
22	First Q.	29·907	71·2	52·1	59·5	53·9	101·0	42·3	65·6	63·4	5·6	13·5	3·6	— 0·9	SW	SW	0·0	0·0	0·0	195	0·00
23	[illegible]	29·779	74·6	55·9	63·[illegible]	52·8	111·5	46·8	65·9	63·7	10·9	18·7	0·4	- 3·4	SW	SW	5·0	0·0	0·8	317	0·02
24	..	29·717	72·[illegible]	53·5	59·5	50·4	106·0	52·5	66·1	63·9	9·1	17·6	2·2	— 0·8	SW	SW	2·0	0·0	0·1	260	0·00
25	..	29·424	70·0	50·3	59·1	50·4	108·0	42·6	64·6	62·4	8·7	17·1	2·0	— 1·1	SSW	SW	5·0	0·0	0·6	326	0·40
26	..	29·[illegible]	64·2	51·1	57·1	54·0	94·0	..	65·6	63·4	3·1	8·7	1·2	— 2·8	SW	S	1·5	0·0	0·0	235	0·24
27	Perigee	29·278	69·2	55·[illegible]	60·3	55·4	97·0	53·2	64·9	62·7	4·9	12·4	1·3	+ 0·6	SW	SW	5·0	0·0	0·5	250	0·29
28	Full	29·[illegible]	72·3	51·0	61·0	52·6	110·3	44·3	65·6	63·4	8·4	18·4	1·2	+ 1·4	SSW	SW : Calm	0·0	0·0	0·0	187	0·03
29	In Equator	29·619	71·0	51·3	59·3	52·6	111·5	45·2	65·1	62·4	6·7	15·7	1·2	— 0·1	SW	SW	1·0	0·0	0·1	157	0·26
30	..	29·[illegible]	72·1	51·1	60·3	49·1	109·0	42·7	65·8	63·6	11·2	19·8	2·0	+ 1·2	SW	SW : SE	1·0	0·0	0·0	244	0·00
31	..	29·655	68·4	55·0	59·6	49·9	100·0	49·1	65·6	63·4	9·7	14·4	4·8	+ 0·6	S	WSW	6·0	0·0	1·0	306	0·05
Means	..	29·744	73·8	53·7	61·9	53·5	106·5	46·7	66·6	64·4	8·3	17·1	2·3	+ 0·9	...	...	..	..	..	Sum 7098	Sum 1·83

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·995 on the 9th; the second minimum was 29in·845 on the 11th.
The second maximum .. was 29in·938 on the 12th; the third minimum .. was 29in·761 on the 13th.
The third maximum .. was 29in·889 on the 14th; the fourth minimum .. was 29in·546 on the 17th.
The fourth maximum .. was 29in·766 on the 19th; the fifth minimum .. was 29in·597 on the 19th.
The absolute maximum .. was 30in·018 on the 21st; the sixth minimum .. was 29in·298 on the 25th.
The sixth maximum .. was 29in·383 on the 26th; the absolute minimum .. was 29in·234 on the 27th.
The seventh maximum .. was 29in·739 on the 30th; the eighth minimum .. was 29in·539 on the 31st.
The range in the month was 0in·784.
The mean for the month was 29in·744, being 0in·047 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 84°·9 on the 9th; the lowest was 46°·0 on the 21st; and the range in the month was 38°·9.
The mean .. of all the highest daily readings was 73°·8, being 1°·0 *higher* than the average of the preceding 22 years.
The mean .. of all the lowest daily readings was 53°·7, being 0°·4 *higher* than the average of the preceding 22 years.
The mean daily range was 20°·1, being 0°·6 *greater* than the average of the preceding 22 years.
The mean for the month was 61°·9, being 0°·6 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Aug. 1	w	o : w	6, ci, li.-cl : 9, ci.-s	3, ci : 8, ci : 2, ci, ci.-s
2	w	w	7, ci, ci.-cu, v, t, l	6, ci, ci.-cu : 8, ci.-s
3	o	o : w	10, : 10, sl.-r	10, cu.-s, ci.-s : 4, ci.-s, li.-cl
4	w : o	o : w	v, li.-cl : 10 : 4, ci.-cu, ci, ci.-s, cu.-s	10, cu.-s, ci.-cu, ci.-s : 10, r
5	o : m	m : o	10, ci.-cu, ci.-s	10, ci.-s : 5, ci.-cu, ci, ci.-s : 2, ci, ci.-cu
6	o	o : m	10, h.-r : 10, r	10, ci.-s, cu.-s : 10, ci.-s, cu.-s
7	o : w	o : w	9, cu.-s, ci.-cu : 10, cu.-s	10, cu.-s, ci.-s, ci.-cu : 2, ci.-s, ci
8	o	o : w	10, cu.-s : 10, cu.-s, ci.-s, ci	10, cu.-s, ci.-s : 3, ci.-cu, ci : 3, ci, ci.-s
9	m	w : o	10, cu.-s	1, cu.-s, ci.-cu, ci : 0, ms
10	w : o	w	0 : 8, cu.-s, ci.-cu, ci	7, ci.-cu, ci : 4, ci, ci.-cu : 0, ms
11	m : w	w : o	10, cu.-s, ci. cu : 8, ci.-cu, cu.-s	6, cu, ci.-cu, ci : 7, ci.-cu, cu.-s, m
12	o	w : o : w	8, ci, ci.-cu	4, ci.-cu, h, ci : 9, cu, cu.-s, ci : 2, ci, ci.-s, m
13	w	w	0 : 9, ci.-cu, cu.-s	6, ci, cu, ci.-cu : 7, ci.-s, li.-cl
14	o	o	10, cu, cu.-s	7, ci, ci.-cu, ci.-s, h : 0
15	o	o : m	2, ci, li.-cl : 9, ci.-s, ci.-cu	7, v, ci, cu, ci.-cu, cu.-s : 2, ci, cu, li.-cl : 0
16	o	o	0 : 9, cu, cu.-s, s	9, cu, cu.-s, s : 5, s, ci.-s, li.-cl
17	w : o	o	2, ci.-cu, ci.-s, ci, li.-cl : 10, cu, ci.-s, sl.-r	5, cu, ci.-cu, ci : 9, cu, cu.-s, h.-shs : 0
18	s : o	w : m	9, ci.-s, li.-cl : 6, ci.-cu, ci, th.-r	10, ci.-s, cu.-s, cu, oc.-shs : 10, s, ci.-s, sl.-r
19	w : w	sN, sP, sps, g.-cur : w	10, ci.-s, ci.-cu : 10, shs.-r	10, oc.-shs : 5, ci.-cu, li.-cl : 10, sl.-r, l
20			10, l : 1, ci, ci.-cu, ci.-s : 7, cu, ci.-cu, ci, sl.-r	10, ci.-s, ci.-cu, cu.-s : 0
21	o	o : w	0, h : 4, ci.-s, ci, h	9, ci, ci.-cu, h : 10
22	o	o	10, cu.-s, sl.-r	10 : 1, li.-cl, h : 8, ci.-cu, cu.-s
23	o	o : w	10, sl.-r : 9, ci.-cu, ci.-s	8, ci.-cu, ci. ci.-s : 10, ci.-s
24	o	o	10, ci.-s, cu.-s : 10, ci.-s, th.-r	10, ci.-s, cu.-s, ci : 0
25	o : m N	sN, sP, sps, g.-cur : o : s	9, ci, ci.-cu, cu.-s, ci.-s, sl.-r	9, cu.-s, ci.-cu, ci : 10, t.-s, l, t, h.-r
26	o	o	0 : 10, ci.-s, ci.-cu	10, h.-r : 10, oc.-shs
27	o	o	10, ci.-s, cu.-s : 10, h.-r, ci.-s, cu.-s	8, ci, ci.-cu, cu.-s, li.-shs : 10, h.-r
28	o	w : s, sps	5, ci, ci.-s, li.-cl : 5, cu, ci.-cu	6, cu, ci.-cu : 6, cu, ci.-cu : 9, s, ci.-s, t, l, h.-r
29	o	o : m	10 : 1, li.-cl : 3, cu.-s, ci.-cu, ci	7, cu.-s, ci.-cu, ci : 0
30	w	o	1, cu, cu.-s, sl.-r	6, cu, ci.-cu, cu.-s, ci : 10
31	w : o	wN : sN, sP, sps, g.-cur : w	10, oc.-r : 10, ci, ci.-s : 8, ci, ci.-cu, fr.-shs	5, ci, ci.-cu, cu, cu.-s, st.-w : 10, cu.-s, oc.-shs : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 64°·9 on the 9th; and the lowest was 44°·8 on the 19th.

The mean ,, was 53°·6, being 0°·5 *lower* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·412, being 0^{in}·010 *less* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·5, being 0^{gr}·2 *less* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 74 (that of Saturation being represented by 100), being 3 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 527 grains, being 2 grains *less* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·0.

WIND.

The proportions were of N. 2, S. 11, W. 14, E. 3, and Calm 1. The greatest pressure in the month was 6^{lbs}·0 on the square foot on the 15th and 31st.

RAIN.

Fell on 13 days in the month, amounting to 1^{in}·8 as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·6 *less* than the average fall of the preceding 48 years.

ELECTRICITY.—On August 20, the insulating lamp was not burning.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32 Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 15 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Sept. 1	..	29·906	68·0	45·2	56·2	47·0	107·0	34·1	65·6	63·4	9·2	18·0	1·7	— 2·6	WSW	SW	1·0	0·0	0·0	245	0·00
2	..	29·679	63·3	51·8	56·1	50·9	86·0	45·5	65·1	62·9	5·2	9·3	1·6	— 2·5	SW	SSW	5·0	0·0	0·5	263	0·04
3	..	29·617	69·2	53·7	60·5	51·6	102·0	49·1	64·9	62·7	8·9	16·9	2·4	+ 2·0	S	SSW : Calm	1·0	0·0	0·1	172	0·01
4	Last Qr.	29·726	66·0	49·9	56·8	50·8	93·5	42·7	64·9	62·7	6·0	12·0	0·8	— 1·6	SW	SW	0·0	0·0	0·0	236	0·37
5	Greatest Dec. N.	29·597	65·3	46·8	55·1	50·6	88·8	37·8	64·7	62·5	4·5	10·9	0·8	— 3·1	SW	SW : W	3·0	0·0	0·3	347	0·24
6	..	29·717	64·0	46·2	54·0	46·3	88·8	38·0	64·6	62·4	7·7	14·6	0·6	— 4·0	W	SW	4·0	0·0	0·3	443	0·13
7	..	29·548	66·6	50·6	57·6	46·3	100·6	..	64·1	61·9	11·3	19·0	1·7	— 0·2	SW : W	W : W	6·0	0·0	1·5	394	0·31
8	Apogee	29·807	64·1	46·7	54·8	48·3	93·3	38·1	64·1	61·9	6·5	13·1	2·9	— 2·9	SW	SW	2·0	0·0	0·0	264	0·00
9	..	29·610	65·5	50·8	56·2	52·3	89·0	38·4	63·8	61·6	3·9	9·5	0·4	— 1·4	SSW	SW : Calm	0·0	0·0	0·0	133	0·07
10	..	29·704	60·7	46·7	52·3	43·6	84·2	44·1	63·6	61·4	8·7	14·4	1·7	— 5·2	NW	NW : W	0·0	0·0	0·0	218	0·40
11	..	30·052	63·0	42·3	52·3	44·2	89·5	34·2	63·3	61·1	8·1	16·2	2·2	— 5·1	W : NW	NW : SW	0·0	0·0	0·0	177	0·00
12	..	30·080	66·2	43·8	54·4	47·0	98·5	35·2	63·1	60·9	7·4	17·3	5·3	— 2·9	SW	WSW	0·0	0·0	0·0	227	0·00
13	In Equator; New	30·114	65·8	49·5	56·9	49·0	91·2	40·5	63·1	60·9	7·9	11·0	0·8	— 0·3	WSW	W	0·0	0·0	0·0	207	0·00
14	..	30·178	60·3	44·5	52·6	48·4	74·0	35·9	62·8	60·6	4·2	9·5	2·0	— 4·4	W	NW : WSW	0·0	0·0	0·0	173	0·00
15	..	29·988	60·6	51·3	56·5	46·7	78·5	46·9	62·6	60·4	9·8	11·4	0·4	— 0·2	SW	SW	0·0	0·0	0·0	269	0·00
16	..	29·892	65·9	51·1	56·2	47·1	100·2	50·2	62·6	60·4	9·1	13·7	1·2	— 0·3	WSW	WNW	0·0	0·0	0·0	244	0·00
17	..	29·967	65·9	43·8	53·8	46·3	99·0	41·7	62·6	60·4	7·5	13·0	4·6	— 2·5	WSW	WSW	0·0	0·0	0·0	217	0·00
18	..	29·925	67·0	47·9	56·2	46·9	102·6	39·2	62·8	60·6	9·3	15·2	1·1	+ 0·2	SW	SW : SSW	0·0	0·0	0·0	184	0·00
19	Greatest Declination S.	29·584	71·8	50·8	60·4	52·3	104·6	43·4	62·6	60·4	8·1	18·2	2·4	+ 4·5	S : SW	SW	8·0	0·0	1·8	461	0·00
20	First Qr.	29·335	58·3	46·8	49·7	45·1	88·3	45·0	62·4	60·2	4·6	7·6	2·3	— 5·9	SW	SW	3·0	0·0	0·2	339	0·69
21	..	28·985	61·7	45·5	50·6	43·8	101·0	38·5	62·2	60·0	6·8	14·8	1·5	— 4·9	SW	SW	1·0	0·0	0·0	331	0·01
22	..	28·801	60·8	45·1	51·2	43·5	87·0	36·4	61·6	59·4	7·7	15·0	2·3	— 4·2	SW	SW	3·0	0·0	0·1	304	0·06
23	..	29·[illegible]25	60·1	40·8	4[illegible]	42·8	93·0	31·3	61·2	59·0	7·1	14·4	2·0	— 5·4	SW	SW	2·5	0·0	0·1	219	0·04
24	Perigee	29·251	58·3	43·1	48·9	45·9	84·5	34·6	60·9	58·7	3·0	8·5	0·8	— 6·1	SSW : SSE	SW : S	1·5	0·0	0·0	221	0·37
25	..	29·589	63·0	42·1	52·0	45·4	93·7	34·4	60·6	58·4	6·6	14·1	2·5	— 2·9	SW	WSW	0·0	0·0	0·0	212	0·00
26	In Equator	29·935	63·2	41·7	50·1	44·6	96·9	31·0	60·6	58·4	5·5	12·4	0·2	— 4·6	WSW	W : SW	1·0	0·0	0·0	216	0·00
27	Full	29·965	58·0	37·5	51·6	44·9	95·8	27·8	59·6	57·4	6·7	10·6	3·0	— 2·9	SW	SW	3·0	0·0	0·4	398	0·00
28	..	29·690	57·8	43·0	49·2	44·5	88·0	37·6	58·6	56·4	4·7	14·8	1·8	— 5·1	SW	W : SW	4·0	0·0	0·3	247	0·21
29	..	29·874	60·8	39·2	49·5	40·8	91·5	27·7	58·1	55·0	8·7	16·2	3·2	— 4·5	W	SW : S	0·0	0·0	0·0	133	0·00
30	..	29·571	63·2	35·[illegible]	50·5	47·[illegible]	95·5	28·6	57·1	54·9	3·5	13·4	1·0	— 3·5	Calm	SE : S	3·0	0·0	0·1	268	0·00
Means	..	29·693	63·5	45·8	53·7	46·8	92·9	38·2	62·5	60·3	6·9	13·5	1·8	— 2·7	...	...	..	..	..	Sum 7762	Sum 2·97

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·937 on the 1st; the first minimum in the month was 29in·589 on the 3rd.
The second maximum .. was 29in·758 on the 4th; the second minimum .. was 29in·534 on the 5th.
The third maximum .. was 29in·772 on the 6th; the third minimum .. was 29in·402 on the 7th.
The fourth maximum .. was 29in·831 on the 8th; the fourth minimum .. was 29in·592 on the 9th.
The absolute maximum .. was 30in·200 on the 14th; the fifth minimum .. was 29in·885 on the 16th.
The sixth maximum .. was 29in·982 on the 17th; the absolute minimum .. was 28in·782 on the 22nd.
The seventh maximum .. was 30in·048 on the 26th; the seventh minimum .. was 29in·570 on the 28th.
The eighth maximum .. was 29in·899 on the 29th.
The range in the month was 1in·418.
The mean for the month was 29in·693, being 0in·132 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 71°·8 on the 19th; the lowest was 35°·0 on the 30th.
The range .. was 36°·8.
The mean .. of all the highest daily readings was 63°·5, being 4°·0 *lower* than the average of the preceding 22 years.
The mean .. of all the lowest daily readings was 45°·8, being 3°·1 *lower* than the average of the preceding 22 years.
The mean daily range was 17°·7, being 0°·8 *less* than the average of the preceding 22 years.
The mean for the month was 53°·7, being 3°·3 *lower* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Sept. 1	m	o : m	0, h : o	5, cu.-s, ci.-cu, ci : 1, ci.-s, v
2	w : o	v : o : w	8, ci, ci.-s : 10, ci.-s, th.-r.	10, ci.-s, cu.-s, oc.-shs : 10, oc.-r
3	w : o	w : s	10 : 2, ci, ci.-cu, ci.-s : 5, ci, ci.-cu, cu, ci.-s	8, ci, ci.-cu : 10, sl.-r
4	o	s N, s P, sps, g-cur : m	10, h.-r : o : 9, ci, ci.-cu, ci.-s, cu.-s	10, ci.-s, cu.-s, oc.-shs : 3
5	w	o : m : o	0 : 5, cu, ci.-cu, ci	10, ci.-s, h.-r : v, li.-shs
6	o	o : m	0 : 8, cu, cu.-s, ci.-s, s	9, cu.-s, ci.-s, s, r : 10, c.-r
7	o	o	10, c.-h.-r : 9, ci, ci.-s, cu.-s	2, ci, ci.-cu, cu, cu.-s : o
8			6, ci.-s, ci : 10, ci.-cu, ci.-s, ci	10, ci.-cu : 10, sl.-r
9			10, ci.-s, r : 10, sl.-r	10, v, cu.-s, ci.-s : o, l : 10, t.-s, h.-r
10	o	o	10, t, l, h.-r : 10, oc.-r : o, h	9, cu.-s, ci.-cu, ci, ci.-s : 1, ci, h, l
11	w	o : w	8, ci.-s, ci, ci.-cu, cu : 4, ci, ci.-cu, h	9, ci, ci.-cu, ci.-s, cu.-s, h : 10
12	w	o : w	10, ci.-s, cu.-s : 10, ci.-s	7, ci, ci.-cu, h : 10, ci.-s : 10
13	w	w : o	9, ci.-cu, ci, h	10, ci.-s, cu.-s : v
14	w	o : s	10, ci.-s : 10, f	10, ci.-s : 10
15	w	o : w	10, ci.-s : 9, ci, ci.-cu	10, ci.-s : 10, ci.-s
16	o : w	w : v	10 : 8, cu.-s, ci.-s, ci, ci.-cu	9, cu, ci.-cu, ci, ci.-s, cu.-s, h : 10
17	m	w : m	10 : 1, ci, h	7, cu, cu.-s, ci.-s, ci : v, li.-cl : o
18	m	w	10, ci, cu, ci.-s : 9, ci.-cu, cu, ci	3, ci, cu, ci.-cu : o
19	o : w	o	o : 10, ci.-s	o : 10, v, w : 10, st.-w
20	o : s N	o	10, h.-r : 10, oc.-r	10 : o
21	w	sP, sN, sps, g-cur : m	8, ci.-s, cu.-s : 9, ci.-cu, ci.-s, ci	9, ci, cu, cu.-s, hl, r : 1, ci.-s
22	w	w : s	8, ci.-cu, ci, ci.-s, cu.-s : 10, ci.-cu, ci.-s	10, cu.-s, ci.-s, ci.-cu, shs.-r : v, sl.-r, t, l
23	m : s	sN, sP, sps, g-cur : w	o : o	9 cu.-s, ci.-s, sl.-r : 3, cu.-s, ci.-s, hl, r : o, l
24	o : s N	o	1, li.-cl : 2, ci, li.-cl : 10, h.-r	10 : 7, ci, ci.-cu, ci.-s, h.-shs : o
25	o	o : w	o : o	8, cu, ci.-cu, cu.-s : 3, ci.-cu, cu, ci : o
26	o : w	m : o : s	3, ci, ci.-s : 8, ci, ci.-cu, ci.-s	8, ci, ci.-cu, cu : o
27	o	o : w	5, ci, s, li.-cl	9, s, ci.-s : 10, ci.-s
28			10, ci.-s, sc : 10, h.-r	6, cu.-s, ci.-s, ci, ci.-cu : o
29			3, ci, ci.-s : o	5, cu, ci.-cu, ci, cu.-s : o
30	o	w : o	0, f : 10, ci, ci.-cu, f	6, ci, ci.-cu : 10, ci.-s : 10, h.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 55°·6 on the 7th; and the lowest was 39°·1 on the 28th.

The mean ,, was 46°·8, being 4°·3 *lower* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}·321$, being $0^{in}·061$ *less* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $3^{gr}·6$, being $0^{gr}·6$ *less* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 77 (that of Saturation being represented by 100) being 4 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 535 grains, being 1 grain *greater* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·9.

WIND.

The proportions were, N. 0, S. 11, W. 18, E. 0, and Calm 1. The greatest pressure in the month was $8^{lbs}·0$ on the square foot on the 19th.

RAIN.

Fell on 14 days in the month, amounting to $3^{in}·0$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{in}·6$ *greater* than the average fall of the preceding 48 years.

ELECTRICITY.—The insulating lamp was not burning on September 8, 9, 28, and 29.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer read at 9h P.M.	Lowest on the Grass, as shown by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day	Rain in Inches read at 9h A.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Oct. 1	..	29·141	62·0	50·1	53·8	50·9	88·2	44·4	56·2	54·0	2·9	7·2	0·4	+ 0·3	SW	W	1·0	0·0	0·0	266	0·5
2	Greatest Declination N.	29·641	56·4	48·0	52·4	47·3	65·4	39·7	55·6	53·4	5·1	8·2	2·6	— 1·0	WNW	SW	0·0	0·0	0·0	325	0·0
3	..	29·735	61·0	52·5	57·1	55·9	66·4	46·0	55·5	53·3	1·2	4·0	1·0	+ 4·0	SW	SW	5·0	0·0	1·0	467	0·0
4	Last Qr.	29·789	66·5	53·0	58·0	52·9	82·6	52·7	55·5	53·3	5·1	7·2	3·0	+ 5·0	SW	SW : N	4·0	0·0	0·4	157	0·0
5	..	29·836	57·8	41·6	49·4	46·5	75·0	32·7	55·6	53·4	2·9	10·0	0·4	— 3·4	SW	SW : S	0·0	0·0	0·0	136	0·0
6	Apogee	29·786	52·3	37·5	44·8	39·8	73·8	37·5	55·7	53·4	5·0	10·8	0·5	— 7·7	W	SE	0·0	0·0	0·0	126	0·0
7	..	29·525	60·5	47·0	53·8	52·9	83·6	32·3	55·8	53·6	0·9	2·6	0·4	+ 1·5	SE	E	1·0	0·0	0·0	234	0·1
8	..	29·428	64·4	54·8	58·9	55·3	84·7	50·8	56·0	53·8	3·6	8·0	0·8	+ 6·8	E	E	3·0	0·0	0·0	202	0·0
9	..	29·417	59·0	46·9	50·8	47·5	85·4	44·1	56·4	54·2	3·3	8·4	0·8	— 1·1	SE	SE	0·0	0·0	0·0	229	0·0
10	In Equator	29·517	62·5	51·0	57·8	50·3	82·7	42·5	56·4	54·2	7·5	11·8	4·8	+ 6·1	SSE	SE	3·0	0·0	0·3	277	0·1
11	..	29·454	61·1	51·0	54·7	47·6	90·7	47·1	56·6	54·4	7·1	11·8	1·8	+ 3·3	SE : SW	SW : SE	3·5	0·0	0·1	179	0·0
12	New	29·29[illegible]	62·0	48·3	54·5	47·0	91·7	42·2	56·6	54·4	7·3	14·4	0·6	+ 3·3	SSE	SE	0·0	0·0	0·0	198	0·0
13	..	29·198	57·0	48·8	52·8	49·1	72·0	44·5	56·7	54·5	3·7	5·8	0·4	+ 2·3	SSE	S : SE	3·0	0·0	0·0	239	0·0
14	..	29·434	63·7	49·9	55·9	49·7	93·4	41·8	56·7	54·5	6·2	12·2	1·4	+ 5·8	SSE : SSW	SW : SE	1·0	0·0	0·0	193	0·0
15	..	29·444	58·8	49·3	52·8	52·8	64·0	40·1	56·5	54·3	0·0	1·4	0·0	+ 3·0	SE	SSW	0·0	0·0	0·0	201	0·1
16	..	29·714	61·2	48·0	52·9	47·3	94·0	39·1	56·2	54·0	5·6	12·0	1·7	+ 3·3	SW	SW : SSW	1·0	0·0	0·0	287	0·0
17	Greatest Declination S.	29·860	62·0	46·9	53·4	47·6	87·8	39·2	56·1	53·9	5·8	13·5	1·6	+ 4·0	SW	W : S	0·0	0·0	0·0	245	0·0
18	..	29·886	61·4	45·3	54·0	49·1	91·0	38·0	56·1	53·9	4·9	11·0	0·9	+ 4·8	S : SW	SW	2·0	0·0	0·0	343	0·0
19	First Qr.	29·924	61·6	54·8	57·5	53·8	70·0	48·0	56·2	54·0	3·7	7·0	2·8	+ 8·4	SW	SW	1·7	0·0	0·1	315	0·0
20	Perigee	29·941	59·7	52·1	55·0	52·6	67·0	50·5	56·5	54·3	2·4	5·1	1·0	+ 5·9	SW	WSW : ESE	0·0	0·0	0·0	96	0·0
21	..	29·994	62·4	50·0	55·4	52·5	88·0	48·9	56·6	54·4	2·9	9·1	0·0	+ 6·5	E : SE	SE : SW	0·0	0·0	0·0	111	0·0
22	..	29·980	63·5	48·9	54·9	51·4	85·0	48·1	56·6	54·4	3·5	10·6	0·0	+ 6·3	WSW	W : N	0·0	0·0	0·0	111	0·0
23	In Equator	30·10[illegible]	55·0	41·1	46·9	43·0	71·7	36·2	56·7	54·5	3·9	9·6	0·0	— 1·4	Calm	N : Calm	0·0	0·0	0·0	53	0·0
24	..	30·050	52·8	34·0	43·7	42·2	57·3	33·5	56·8	54·6	1·5	7·6	0·0	— 4·2	Calm	E : SE	0·0	0·0	0·0	96	0·0
25	..	29·854	54·4	39·4	45·5	39·2	84·0	33·0	56·2	54·0	6·3	12·6	0·7	— 2·0	SE	E : NE	0·0	0·0	0·0	86	0·0
26	Full	29·878	55·5	34·8	43·6	42·2	84·0	23·0	55·5	53·3	1·4	6·6	0·2	— 3·8	Calm	NE	0·0	0·0	0·0	30	0·0
27	..	29·767	51·1	34·7	43·6	42·9	58·0	31·8	54·6	52·4	0·7	2·9	0·0	— 3·6	Calm	Calm : SE	0·0	0·0	0·0	70	0·0
28	..	29·493	56·2	43·8	48·9	46·3	72·7	42·0	54·6	52·4	2·6	8·4	0·2	+ 1·9	S	SW	0·0	0·0	0·0	166	0·0
29	..	29·210	54·2	43·7	47·8	45·0	66·8	38·2	54·5	52·3	2·8	8·0	1·1	+ 1·0	S : SW	SW	11·0	0·0	0·6	443	0·1
30	Greatest Declination N.	29·109	54·[illegible]	39·7	45·7	44·1	55·0	36·2	54·1	51·9	1·6	6·1	0·2	— 0·9	SW	SW	29·5	0·0	1·6	547	0·3
31	..	29·355	52·6	38·4	44·8	35·9	79·0	30·0	54·1	51·9	8·9	14·0	1·7	— 1·7	SW	SW	9·0	0·5	3·0	566	0·0
Means	..	29·638	58·8	46·1	51·6	47·8	77·8	40·5	55·9	53·7	3·9	8·6	1·0	+ 1·7	...	...	..	..	..	Sum 6994	Sum 1·82

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first minimum in the month was 29in·086 on the 1st.
The first maximum in the month was 29in·879 on the 5th; the second minimum ,, was 29in·380 on the 9th.
The second maximum ,, was 29in·552 on the 10th; the third minimum ,, was 29in·159 on the 13th.
The third maximum ,, was 29in·575 on the 14th; the fourth minimum ,, was 29in·404 on the 15th.
The fourth maximum ,, was 30in·032 on the 21st; the fifth minimum ,, was 29in·958 on the 22nd.
The absolute maximum ,, was 30in·129 on the 23rd; the absolute minimum ,, was 28in·847 on the 30th.
The range in the month was 1in·282.
The mean for the month was 29in·638, being 0in·061 *lower* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 66°·5 on the 4th; the lowest was 34°·0 on the 24th; and the range in the month was 32°·5.
The mean ,, of all the highest daily readings was 58°·8, being 0°·1 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 46°·1, being 2°·1 *higher* than the average of the preceding 22 years.
The mean daily range was 12°·7, being 2°·0 *less* than the average of the preceding 22 years.
The mean for the month was 51°·6, being 1°·1 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Oct. 1	o : w	s N : m	10, c-h-r : 3, ci.-cu, ci.-s : 2, ci, ci.-cu	10, h.-r : 7, cu, ci.-cu, ci.-s : o
2	o	o : w	10, sl.-r : 10, ci.-s	10, ci.-s : 10
3	o	o	10 : 10, oc.-shs	10, sl.-r : 10
4	o	v : m	v, li-cl, sl-r	10, ci.-s : 9
5	o : s	o : s	1, ci.-cu, ci.-s : 7, ci.-cu, ci.-s	10, ci.-s, shs.-r : 10, ci.-s
6	m : o	o : m	o : 5, ci, ci.-cu, h	8, ci, ci.-s : 1, ci, h : o
7	o : w	w	h-r : 8, ci.-cu, cu.-s, sl.-r : 10	6, ci.-cu, cu, h, oc.-shs : 10, sc, shs.-r : 10, l
8	w	o : w	10, l. r : 6, ci, ci.-cu, li.-cl, h	8, ci, li.-cl, cu.-s, ci.-s, h : 10, sl.-r
9	w	o : s	10, ci.-s : 10, ci.-s, sl.-r	2, ci, cu : o, m, l : 10, l
10	o : w	o : w	10, h.-r : 5, ci, ci.-cu, ci.-s, cu.-s, h	10, cu.-s, ci.-s, ci.-cu : 10
11	o	o	10, oc-r : 1, cu.-s, ci	9, ci.-s, ci : 10, ci.-s
12	o	o : w	2, ci, ci.-s : 9, ci, ci.-s, ci.-cu	6, cu, ci, ci.-cu : 2, ci, ci.-cu, cu : 10
13	o	s N, sps : m	10 : 8, ci.-cu, ci.-s, cu.-s, sl.-r	10, ci.-s, cu.-s, r : 3, ci, ci.-cu : o
14	o	m : o : s	3, ci, ci.-cu : o	6, cu, cu.-s, ci.-cu, ci.-s, ci : o
15	o : s N	m : o : s	o : 10, oc.-shs	10, oc.-shs : 3
16	o	o : m	10, shs.-r : o : 10, ci.-s, ci.-cu	7, ci, cu, ci.-cu, ci.-s, cu.-s : o, m
17	w : m	m : s	10, sl-r : 10, cu.-s	3, cu, ci.-cu, h : o, h
18	m	m : w	10, s, ci.-s, ci	10 : 10
19	o	v	10, ci.-s : 10	10 : 10
20	m : m	m : s	10, m-r : 10	10, ci-s, gt.-glm : 10
21	w : s	v : o	10, sl.-r : 10, ci.-s	8, ci, ci.-cu, ci.-s, h : v, ci.-cu, ci.-s, cu.-s : 10
22	w	m : v	9, ci.-s, ci.-cu : 10, ci.-s	9, ci, ci.-cu, ci.-s : 8, ci, cu
23	s	w : s	1, li.-cl : 10, li.-cl, h	o, h : 2, ci, h : o, f
24	v	m : s, sps	10, th.-f : 10, f	10, f : 10, cu.-s, ci.-s
25	m	v	o	1, li.-cl : 2, li.-cl
26	s : w	m : o	o, f : 2, li.-cl, f	4, li.-cl : 10, cu.-s, f, h.-cl
27	w : o	o	10, th.-f : 10, th.-f	10, f : 10, ci.-s, cu.-s
28	o	o : s, sps	10 : 8, li.-cl, ci, ci.-cu	10, sl.-r : o : 10, cu.-s, ci.-s
29	s, sps : w : o	o	10 : 10, li.-cl : 10, ci.-s, oc.-shs	10, oc.-shs, w : 8, cu, cu.-s
30	o	w, N : o	o : 10, st.-w, r	10, h.-r, st.-w, sqs : v, l
31			o : o	4, ci, ci.-cu, st.-w : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·3 on the 3rd; and the lowest was 35°·0 on the 31st.

The mean ,, was 47°·8, being 1°·4 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·333, being 0^{in}·016 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·7, being the *same* as the average of the preceding 22 years.

Degree of Humidity. The mean for the month was 87 (that of Saturation being represented by 100), being the *same* as the average of the preceding 22 years.

Weight of a Cubic Foot of Air. The mean for the month was 5,37 grains, being 2 grains *less* than the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·2.

WIND.

The proportions were of N. 1, S. 12, W. 8, E. 6., and Calm 4. The greatest pressure in the month was 29^{lb}·5 on the square foot on the 30th.

RAIN.

Fell on 17 days in the month, amounting to 1^{in}·8, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·0 *less* than the average fall of the preceding 48 years.

ELECTRICITY.—The insulating lamp was not burning on October 31.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of Barometer (corrected and reduced to 32° Fahr.)	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun's Rays (Solar Thermometer exposed to the Sky).	Lowest on the Grass (Terrestrial Thermometer 1 foot above the ground).	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day (1) for 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obss.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h P.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Nov. 1	..	29·387	49·5	38·5	42·6	36·3	78·0	29·7	53·6	51·4	6·3	9·5	3·5	— 3·8	SW	SW : S	6·0	0·0	0·8	410	0·01
2	..	[illegible]	50·0	40·[illegible]	44·8	38·1	74·8	37·0	52·7	50·5	6·7	11·4	2·2	— 1·4	S : SW	SW : NW	10·0	0·0	0·8	462	0·50
3	[illegible]	29·620	53·3	37·5	45·7	43·4	55·0	26·4	52·9	50·7	2·3	7·4	0·0	— 0·4	W : SW	SW	6·0	0·0	0·7	505	0·02
4	..	29·849	60·8	51·7	56·0	51·3	72·0	45·4	52·6	50·4	5·0	7·4	2·0	+ 10·1	WSW	SW	5·0	0·0	2·0	530	0·02
5	..	30·027	56·8	52·2	54·2	51·0	58·6	48·8	52·6	50·4	3·2	5·1	0·8	+ 8·5	WSW	WSW	4·0	0·0	0·4	312	0·00
6	In Equator	30·323	48·5	34·3	40·3	36·4	80·4	30·4	52·1	49·9	3·9	7·7	0·3	— 5·2	N : NE	NE : Calm	0·0	0·0	0·0	101	0·04
7	..	30·210	53·0	42·0	47·5	47·5	53·1	28·0	52·1	49·9	0·0	1·7	0·0	+ 2·4	Calm : SW	W	0·0	0·0	0·0	360	0·00
8	..	29·[illegible]	53·3	44·7	48·3	48·1	56·0	29·8	51·1	48·9	0·2	0·8	0·0	+ 3·5	SW	NW : N	4·0	0·0	0·3	430	0·25
9	..	30·059	49·6	34·4	41·3	35·2	79·7	29·7	50·6	48·4	6·1	11·6	3·0	— 3·2	NNE	NE	3·0	0·0	0·2	204	0·00
10	..	29·607	45·0	28·1	37·7	37·2	49·0	28·0	50·4	47·4	0·5	2·4	0·0	— 6·6	Calm : SW	W : NW	1·0	0·0	0·0	224	0·08
11	New.	29·246	44·5	32·6	38·1	36·2	47·2	26·5	49·5	47·3	1·9	3·3	1·0	— 5·9	SW : NE	N : NNW	0·0	0·0	0·0	166	0·00
12	..	[illegible]	43·4	29·7	37·4	34·8	64·4	23·0	49·1	46·9	2·6	6·4	0·0	— 6·5	SW : N	N	1·0	0·0	0·0	183	0·00
13	[illegible]	30·11[illegible]	48·0	29·7	40·6	37·6	77·0	23·0	49·0	46·8	3·0	7·8	0·4	— 2·9	SW	SW	0·0	0·0	0·0	209	0·00
14	..	30·117	50·2	44·6	47·7	44·8	52·2	35·0	49·3	47·1	2·9	5·0	1·7	+ 4·4	SW	SW	0·0	0·0	0·0	172	0·00
15	Perigee.	30·089	53·0	45·1	47·0	43·6	57·2	37·2	49·0	46·8	5·4	8·8	0·4	+ 6·0	SW	SW	0·0	0·0	0·0	246	0·00
16	..	30.004	55·0	45·4	50·6	49·3	60·0	40·6	48·9	46·7	1·3	4·0	0·0	+ 8·0	SW	SW	1·0	0·0	0·0	316	0·00
17	..	30·009	53·8	47·3	50·2	45·0	59·2	42·5	48·6	46·4	5·2	8·0	1·7	+ 7·8	SW	SW	4·0	0·0	0·3	285	0·00
18	First Qr.	30·090	51·3	46·0	48·3	43·3	59·0	40·5	48·2	46·0	5·0	7·1	2·5	+ 6·1	SSW	S	1·0	0·0	0·0	177	0·00
19	In Equator	30·052	53·6	43·1	47·3	42·3	78·0	36·0	48·1	45·9	5·0	8·4	1·5	+ 5·1	SSW	S	0·0	0·0	0·0	134	0·00
20	..	29·967	53·0	39·4	45·7	43.0	81·0	30·2	47·9	45·7	2·7	6·3	0·0	+ 3·5	Calm : SW	S	0·0	0·0	0·0	192	0·00
21	..	29·582	56·2	41·4	49·3	45·5	58·9	30·1	47·9	45·7	3·8	7·2	0·0	+ 7·3	S	SSW : WSW	17·5	0·0	1·8	497	0·13
22	..	29·661	50·8	41·5	46·7	40·2	77·7	34·0	47·9	45·7	6·5	10·9	0·4	+ 5·0	WSW	SW	2·5	0·0	0·3	305	0·00
23	..	29·723	53·0	42·7	48·3	44·7	77·0	30·9	47·9	45·7	3·6	7·6	0·0	+ 6·9	SW	SW	0·0	0·0	0·0	222	0·00
24	..	29·726	55·3	47·6	52·1	51·6	62·0	42·0	47·8	45·6	0·5	1·8	0·0	+11·1	SSW : S	SW	0·0	0·0	0·0	238	0·25
25	Full.	29·938	55·[illegible]	40·2	52·8	49·7	67·1	41·5	47·8	45·6	3·1	6·3	0·6	+12·0	SSW	S	0·0	0·0	0·0	211	0·00
26	[illegible]	30·212	51·8	43·9	49·0	48·1	55·3	38·0	47·8	45·6	0·9	2·2	0·0	+ 8·1	SSE	SE	0·0	0·0	0·0	155	0·00
27	..	30·166	50·0	40·3	45·6	43·1	64·7	33·0	47·9	45·7	2·5	4·6	0·0	+ 4·5	SE	SSE	0·0	0·0	0·0	99	0·00
28	..	30·146	46·5	35·7	41·0	37·2	78·2	32·9	48·0	45·8	3·8	6·3	1·0	— 0·5	SE	SE	0·0	0·0	0·0	135	0·00
29	..	30·134	45·0	30·6	36·8	34·3	63·0	23·5	48·0	45·8	2·5	5·9	0·0	— 4·8	SE	E	0·0	0·0	0·0	141	0·00
30	Apogee.	29·960	42·0	29·8	35·4	33·2	55·0	17·7	48·0	45·8	2·2	4·6	0·0	— 6·2	ESE : NE	E	0·0	0·0	0·0	115	0·00
Means	..	29·870	51·1	40·3	45·7	42·4	65·0	33·0	49·6	47·4	3·3	6·2	0·8	+ 2·4	...	...	..	..	..	Sum 7736	Sum 1·57

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·443 on the 1st; the absolute minimum in the month was 28in·768 on the 2nd.
The second maximum ,, was 29in·707 on the 3rd; the second minimum ,, was 29in·561 on the 3rd.
The absolute maximum ,, was 30in·358 on the 6th; the third minimum ,, was 29in·566 on the 8th.
The fourth maximum ,, was 30in·285 on the 9th; the fourth minimum ,, was 29in·194 on the 11th.
The fifth maximum ,, was 30in·140 on the 13th; the fifth minimum ,, was 29in·995 on the 17th.
The sixth maximum ,, was 30in·113 on the 18th; the sixth minimum ,, was 29in·497 on the 21st.
The seventh maximum ,, was 30in·230 on the 27th.
The range in the month was 1in·590.
The mean for the month was 29in·8[illegible], being 0in·1[illegible] *higher* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 60°·8 on the 4th; the lowest was 28°·1 on the 10th; and the range in the month was 32°·7.
The mean ,, of all the highest daily readings was 51°·1, being 2°·0 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 40°·3, being 2°·9 *higher* than the average of the preceding 22 years.
The mean daily range was 10°·8, being 0°·9 *less* than the average of the preceding 22 years.
The mean for the month was 45°·7, being 1°·7 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Nov. 1			0 : 0	10, ci.-cu, cu.-s, oc.-r : 10
2			10, h.-r, w : 10, c.-h, r	10, ci.-cu, cu.-s, ci : 10, oc.-shs, st.-w
3			w : 0 : 10, ci-s	10, sl.-r : 10, sl.-r
4			10, ci.-s : 10, ci.-s	10 : 10, w
5			10, ci.-s : 10, ci.-s, cu-s, sc, sl.-r	10 : 10, sl.-r
6			10, sl.-r : 3, li.-cl : 0	5, ci, ci.-s, cu.-s : 1, ci, ci.-s : 0, f
7			9 : 10	10, shs.-r : 10, oc.-r
8			10 : 10, r	10, c.-r : 10, r
9			1, ci.-s : 2, ci, ci.-cu	6, ci.-cu, cu.-s : 0
10			6, ci, ci.-s, li.-cl : 10, ci.-s, sl.-r	10, ci.-s : 7, ci, ci.-s : 0
11	0	0 : w : 0	0, h.-fr : 9, li.-cl	10 : 0 : 0, h, f, h.-fr
12	v	w : m	0, h.-fr : 1, h, ci	1, ci, ci.-cu : 0 : 0, h
13	s	w : 0 : s	0, h.-fr : 0, h.-fr : 10, ci.-s	0, v : 10, ci.-s : 10
14	0 : w	0 : s	10 : 10	10 : 10
15	s	s, sps	10 : 10	10 : 10
16	m : s	0	10 : 10	10 : 10, ci.-cu : 0
17	0	0 : m	10, ci.-s : 10	10, : 10, sl.-r
18	w : m	0 : m	10, ci.-s, cu.-s : 10, ci.-s	10, ci.-s, cu.-s : 10, ci.-cu, ci.-s
19	w : 0	0 : sps, g-cur	3, ci.-s, ci.-cu : 9, ci, ci.-cu, cu.-s, ci.-s	9, ci.-cu, cu.-s : 10, ci.-s, cu.-s
20	m	w : s	10, ci.-s : 9, ci.-s, ci.-cu	0 : 3, ci : 1, ci..s
21	0	0	7, s, ci.-s : 8, ci.-cu, ci.-s, s	7,cu,cu.-s,ci.-cu: sq : 0
22			0, : 0	0 : 7, li.-cl, lu.-ha
23			3, ci, ci.-s : 0	8, ci, ci.-cu, ci.-s : 10
24			10 : 10, h.-r	10, sl.-r : 10, oc.-r
25			10, ci.-s : 9, cu.-s, s	7, cu, cu.-s, ci.-cu: 8, s, cu.-s : 0
26			0 : 10, ci.-s	10 : 10
27			10, ci.-s : 10	9, ci.-s, cu.-s, ci.-cu: : 3, ci, ci.-cu: 10
28			9, ci, ci.-s : 9, ci.-s	0 : 0, h.-fr
29	m	w	0, h.-fr : 0, th.-f	5, li.-cl : 0
30	0 : w	s	0, h.-fr : 9, ci.-cu, h	0 : 0, h.-fr

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·5 on the 4th; and the lowest was 29°·8 on the 30th.

The mean ,, was 42°·4, being 2°·6 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·271 being 0^{in}·019 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·1, being 0^{gr}·3 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 88 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 22 years.

***Weight of a Cubic Foot of Air.*—The mean for the month was 547 grains, being 1 grain *less* than the average of the preceding 22 years.**

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·0.

WIND.

The proportions were of N. 3, S. 12, W. 11, E. 4, and Calm 0. The greatest pressure in the month was 17^{lbs}·5 on the square foot on the 21st.

RAIN.

Fell on 11 days in the month, amounting to 1^{in}·6, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·8 less than the average fall of the preceding 48 years.

ELECTRICITY.—The insulating lamp was not burning from November 1 to 10, and the electrical apparatus was under adjustment from November 25 to 28.

MONTH and DAY, 1863.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun as shewn by a Self-Registering Thermometer read at 9h P.M.	Lowest in the Grass, as shewn by a Self-Registering Thermometer read at 9h A.M. next morning.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers read at 9h A.M. next morning. Highest.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 22 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Wind as deduced from Anemometers. Osler's. Pressure in lbs. on the square foot. Greatest.	Wind as deduced from Anemometers. Osler's. Pressure in lbs. on the square foot. Least.	Wind as deduced from Anemometers. Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at 9h A.M.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Dec. 1	..	29·564	51·7	30·2	43·7	42·4	52·0	22·8	47·9	45·7	1·3	3·6	0·0	+ 2·0	SE : S	S : SW	3·5	0·0	0·4	415	0·0
2	..	28·990	51·3	38·8	45·4	43·1	58·0	33·0	47·8	45·6	2·3	8·4	0·8	+ 3·6	SSW : SSE	SW : NW	22·5	0·0	1·7	490	0·3
3	Last Qr.	29·214	54·2	35·9	42·6	31·7	67·6	25·2	47·1	44·9	10·9	15·4	0·0	+ 0·9	S : SW	W : NW	21·0	0·0	4·0	605	0·4
4	In Equator	30·183	46·0	33·7	41·4	34·9	63·0	25·4	46·6	44·4	6·5	9·2	3·5	− 0·1	W : WSW	SW	3·5	0·0	0·2	408	0·0
5	..	29·954	53·0	44·9	49·3	44·5	74·8	40·0	46·4	44·2	4·8	6·8	2·4	+ 7·9	SW	SW	4·2	0·0	0·6	349	0·0
6	..	30·133	47·0	38·3	42·4	37·2	55·0	29·0	45·6	43·4	5·2	8·6	2·1	+ 1·3	WSW	SW	1·0	0·0	0·0	366	0·0
7	..	30·214	51·1	40·7	47·7	42·6	55·5	34·2	44·8	42·6	5·1	7·8	3·4	+ 7·0	SW	SW	2·0	0·0	0·1	416	0·0
8	..	29·946	50·6	44·8	48·1	41·3	56·6	40·0	44·6	42·4	6·8	8·4	3·7	+ 7·5	SW	SW	4·0	0·0	1·3	253	0·0
9	..	29·893	52·1	43·9	47·7	45·9	53·5	42·7	44·7	42·5	1·8	4·6	0·4	+ 7·2	SW	SW : W	2·0	0·0	0·3	234	0·1
10	New;	30·065	48·2	34·8	42·9	38·8	70·0	26·3	44·8	42·6	4·1	7·1	2·0	+ 2·5	SW	WSW	1·0	0·0	0·0	384	0·0
11	Greatest Decl. S.	30·024	50·8	43·9	48·0	43·6	53·0	40·2	44·9	42·7	4·4	5·8	1·5	+ 7·8	WSW	WSW	6·0	0·0	0·6	549	0·0
12	Perigee	29·966	53·5	47·7	50·4	46·4	60·2	43·0	44·9	42·7	4·0	7·4	2·5	+10·4	WSW	WSW	3·0	0·0	0·3	323	0·0
13	..	30·240	49·1	35·5	42·0	38·1	53·2	27·3	45·6	43·4	3·9	8·0	2·3	+ 2·4	NW : W	SW	0·0	0·0	0·0	208	0·0
14	..	30·278	49·9	36·2	42·9	40·3	63·2	28·9	45·6	43·4	2·6	6·9	0·0	+ 3·2	SW	SW	0·0	0·0	0·0	205	0·0
15	..	30·161	47·5	37·7	44·4	42·3	48·5	27·3	45·6	43·4	2·1	4·4	1·0	+ 4·4	SW	SW	0·0	0·0	0·0	322	0·0
16	..	29·670	50·2	36·7	44·0	37·4	68·7	36·0	45·7	43·5	6·6	10·3	1·4	+ 3·7	SW	W	3·0	0·0	0·3	441	0·0
17	In Equator	29·882	45·2	36·5	42·1	33·5	51·2	29·4	45·1	42·9	8·6	11·0	3·1	+ 2·0	W : NW	NW : N	6·0	0·0	1·0	404	0·0
18	First Qr.	30·314	41·3	32·2	36·9	31·8	57·0	26·6	44·9	42·7	5·1	10·6	4·3	− 3·0	N	NNW : WSW	0·0	0·0	0·0	182	0·0
19	..	30·304	48·2	35·0	42·6	40·4	54·5	30·3	44·7	42·5	2·2	5·9	1·8	+ 3·1	WSW	W	0·0	0·0	0·0	160	0·0
20	..	30·156	43·0	36·5	40·7	36·0	45·2	30·5	44·6	42·4	4·7	6·6	3·2	+ 1·7	W	W	0·0	0·0	0·0	253	0·0
21	..	29·931	48·8	37·7	43·4	41·9	57·2	32·1	44·6	42·4	1·5	3·1	0·2	+ 5·0	W : NW	W : SW	0·0	0·0	0·0	338	0·0
22	..	29·882	48·8	30·3	36·7	27·2	57·5	20·0	44·7	42·5	9·5	14·8	4·8	− 1·2	NW	NW	4·0	0·0	0·5	347	0·0
23	Greatest Decl. N.	29·870	48·5	26·5	40·4	37·6	54·5	16·2	43·9	41·7	2·8	6·5	1·0	+ 3·0	WSW	W	3·0	0·0	0·3	353	0·0
24	..	30·078	47·9	41·1	44·7	40·6	51·0	30·8	43·8	41·6	4·1	6·6	1·3	+ 7·7	W	W	0·0	0·0	0·0	210	0·0
25	Full	30·069	48·5	40·3	44·4	37·3	50·0	38·0	43·9	41·7	7·1	10·1	3·2	+ 7·9	SW	SW	0·0	0·0	0·0	322	0·0
26	..	29·803	51·9	39·3	47·4	44·9	56·5	29·8	43·0	41·8	2·5	4·6	1·9	+11·0	SW	WSW	2·0	0·0	0·2	459	0·0
27	..	29·931	49·8	32·9	38·2	27·2	49·8	26·0	44·1	41·9	11·0	13·1	7·8	+ 1·7	W : N	NW	1·0	0·0	0·1	178	0·0
28	Apogee	30·116	41·3	28·9	35·6	29·0	43·3	21·8	44·6	42·4	6·6	11·5	3·0	− 1·4	Calm	SE : S	2·0	0·0	0·1	262	0·0
29	..	29·765	52·0	40·7	47·8	44·0	52·0	39·2	44·3	42·1	3·8	6·8	2·3	+10·5	SW	SW : W	13·0	0·0	2·0	360	0·0
30	..	29·957	46·4	33·3	40·0	36·7	46·4	32·8	44·1	42·4	3·3	6·4	0·6	+ 2·6	W : NW	W : NW	1·6	0·0	0·1	130	0·0
31	In Equator	29·637	40·0	27·9	35·7	34·9	44·2	..	44·5	42·3	0·8	3·7	0·0	− 1·3	Calm : E	E : ENE	2·0	0·0	0·2	331	0·0
Means	..	29·942	48·6	36·8	43·2	38·5	55·6	30·8	45·1	42·9	4·7	7·9	2·1	+ 3·9	...	....	..	..	..	Sum 10257	Sum 1·08

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute minimum in the month was 28in·839 on the 2nd.

The first maximum in the month was 29in·344 on the 2nd; the second minimum ,, was 28in·900 on the 3rd.
The second maximum ,, was 30in·217 on the 4th; the third minimum ,, was 29in·933 on the 5th.
The third maximum ,, was 30in·236 on the 7th; the fourth minimum ,, was 29in·871 on the 9th.
The fourth maximum ,, was 30in·292 on the 14th; the fifth minimum ,, was 29in·624 on the 16th.
The absolute maximum ,, was 30in·359 on the 18th; the sixth minimum ,, was 29in·697 on the 22nd.
The sixth maximum ,, was 30in·092 on the 22nd; the seventh minimum ,, was 29in·820 on the 23rd.
The seventh maximum ,, was 30in·118 on the 24th; the eighth minimum ,, was 29in·718 on the 26th.
The eighth maximum ,, was 30in·183 on the 28th; the ninth minimum ,, was 29in·702 on the 29th.
The ninth maximum ,, was 29in·995 on the 30th; the tenth minimum ,, was 29in·547 on the 31st.

The range in the month was 1in·500.
The mean for the month was 29in·942, being 0in·126 *higher* than the average of the preceding 22 years.

TEMPERATURE OF THE AIR.

The highest in the month was 54°·2 on the 3rd; the lowest was 26°·5 on the 23rd.
The range ,, was 27°·7.
The mean ,, of all the highest daily readings was 48°·6, being 3°·4 *higher* than the average of the preceding 22 years.
The mean ,, of all the lowest daily readings was 36°·8, being 1°·1 *higher* than the average of the preceding 22 years.
The mean daily range was 11°·8, being 2°·3 *greater* than the average of the preceding 22 years.
The mean for the month was 43°·2 being 2°·9 *higher* than the average of the preceding 22 years.

MONTH and DAY, 1863.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Dec. 1	0	0	0, h.-fr : 10, sc, ci.-s	10, ci.-s, cu.-s, oc.-r : 10, sl.-r
2	s N : 0	m : s N, sps, g-cur : 0	10, r : 10, c.-r	10, h.-sqs : 0 : 7, ci.-s, cu.-s, v
3	0	0	7, ci.-s, cu.-s : h.-r : 10, fr.-h.-sqs	0, st.-w : 2, ci, ci.-cu, st.-w : 0
4	0	0	0 : 0	0 : 10, ci.-s : 10
5	0	0	10, ci.-s : 10	10, sl.-r : 10
6	0	0	10, r : 0, h	6, ci.-cu, ci.-s, ci : 0
7	0	0	0 : 10, ci, v : 0	10, ci.-s : 10
8	0	0	2, ci.-s : 10, sl.-r	10, ci.-s, cu.-s : 10
9	0	0	10 : 10, sl.-r	10, glm, h.-shs : 2, s, ci.-s : 10, ci.-s
10	0	0	0 : 0	9 : 10
11	w : 0	0	10, ci.-s : 10, ci.-s	10, ci.-s : 10, w
12	0	0	10, s, cu.-s : 9, cu.-s, ci.-cu, h	4, ci.-cu, ci.-s, cu : 0, m
13	0	0	0, h	6, ci, h : 0, sl.-f
14	0	m : s	0, th.-f : 0, f	0, h : 1, ci : 0
15	0	m : s	10 : 10	10 : 10
16	w : 0	w : v	7, s, cu.-s : 10	8, ci, ci.-cu : 1, li.-cl : 0
17	w : 0	0 : w	0 : 10	10, cu.-s, s : 10, sl.-r
18	0	w : m	0 : 10, cu.-s	0 : 2, ci.-cu, h : 10, f
19	0	w	10, ci.-s : 10	5, li.-cl, h, ci.-cu : 10, li.-cl, f : 0, h, lu.-co
20	w	0	0, h : 10, ci.-cu	10 : 5
21	0 : w	w	10 : 10, shs.-r	10, ci.-s, cu.-s : 10, cu.-s, ci.-cu
22	0	0	10 : 10, sl.-r, hl	0 : 0, h.-fr
23	0	w : 0	6, cu.-s, s : 10	7, ci.-cu, cu.-s : 10, cu.-s, ci.-cu
24	0 : s	s	7, ci.-cu, cu-s : 10, s, ci-s	9, ci.-s, ci.-cu : 10, ci.-s
25	m	s : 0	0, h	0 : 0
26	0	0	10, sl.-r	10 : 6
27	w	w : m	8, li.-cl	9, ci, ci.-s : 0
28	0 : v	0	10, ci.-s : 9, ci.cu, ci.-s	10, sn : 10
29	0	0	10, ci.-s : 10, ci.-cu, cu.-s	10, sl.-r : 9
30	m	w	9, ci.-cu, ci,-s : 6, ci.-cu, ci., h	6, ci, ci.-cu, h : 0, h, f
31	m : 0	w : s	3, ci.-cu, ci.-s, h : 5, ci, ci.-s, h	10, ci.-s, cu.-s : 10, r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 49°·9 on the 9th; and the lowest was 21°·8 on the 22nd.

The mean „ was 38°·5, being 1°·4 *higher* than the average of the preceding 22 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·233 being 0^{in}·010 *greater* than the average of the preceding 22 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·7, being 0^{gr}·1 *greater* than the average of the preceding 22 years.

Degree of Humidity.—The mean for the month was 83 (that of Saturation being represented by 100), being 6 *less* than the average of the preceding 22 years.

Weight of a Cubic Foot of Air.—The mean for the month was 552 grains, being the *same* as the average of the preceding 22 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·8.

WIND.

The proportions were of N. 3, S.7, W. 19, E. 1, and Calm 1. The greatest pressure in the month was 22^{lbs}·5 on the square foot on the 2nd.

RAIN.

Fell on 8 days in the month, amounting to 1^{in}·1 as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·8 *less* than the average fall of the preceding 48 years.

MAXIMA AND MINIMA READINGS OF THE BAROMETER.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° Fahrenheit, extracted from the photographic records. The readings are accurate; but the times are liable to great uncertainty, as the barometer frequently remains at its highest or lowest point through several hours. The time given is the middle of the stationary period. Where the symbol : follows the time, it denotes that the quicksilver has been sensibly stationary through a period of more than one hour.

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1863.		Reading.	Approximate Mean Solar Time, 1863.		Reading.	Approximate Mean Solar Time, 1863.		Reading.	Approximate Mean Solar Time, 1863.		Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
January	2. 11. 8:	29·536	January	1. 20. 45	29·343	April	2. 21. 30	30·096	April	1. 16. 6:	29·900
	6. 0. 0	28·994		5. 8. 9:	28·865		9. 14. 0:	29·685		6. 18. 20:	29·290
	9. 14. 20:	29·646		6. 13. 30:	28·894		13. 0. 0	29·838		10. 13. 0:	29·531
	11. 22. 30:	30·012		10. 5. 15:	29·500		18. 11. 0:	30·140		14. 7. 34:	29·755
	15. 0. 30:	30·263		13. 0. 0	29·714		23. 22. 8:	30·254		21. 21. 19	29·517
	19. 5. 5	29·397		18. 17. 45:	29·150		30. 22. 23:	30·127		28. 7. 10:	29·609
	21. 9. 20:	29·695		19. 19. 23	28·864	May	7. 17. 55:	30·228	May	4. 6. 0:	29·656
	23. 12. 0:	29·755		22. 22. 44	29·407		10. 20. 0:	29·896		9. 17. 56:	29·778
	25. 12. 15:	30·219		23. 21. 14	29·523		13. 23. 40	29·755		12. 12. 15:	29·440
	27. 22. 10:	30·387		26. 14. 0:	29·863		15. 22. 30	29·779		15. 5. 6:	29·634
February	0. 21. 30	29·635		31. 0. 0	29·238		21. 0. 0:	30·055		17. 2. 35:	29·663
	1. 21. 0	29·781	February	1. 0. 0	29·595		27. 21. 0	30·137		23. 5. 36:	29·679
	3. 22. 33:	30·070		2. 21. 41	29·598		31. 12. 15:	30·140		30. 14. 8:	29·963
	6. 0. 0	30·168		4. 15. 15:	29·840	June	9. 0. 15	29·661	June	6. 7. 30:	29·250
	10. 15. 0:	30·101		8. 4. 45:	29·829		11. 0. 0	29·447		10. 12. 44	29·226
	12. 23. 30	30·523		11. 4. 38:	30·023		15. 11. 30:	29·881		11. 17. 3:	29·305
	16. 10. 15:	30·510		14. 17. 25:	30·397		23. 10. 0:	29·984		18. 21. 54	29·369
	22. 20. 30	30·211		21. 17. 50:	30·073		24. 16. 30	29·921		24. 13. 20	29·858
	25. 9. 52:	30·300		23. 11. 0:	30·114		25. 13. 45:	30·025		24. 17. 49	29·862
March	6. 22. 15:	29·455	March	6. 6. 55:	29·243					27. 5. 15:	29·777
	8. 13. 0:	29·494		7. 10. 30:	29·298	July	0. 19. 37:	30·168	July	2. 3. 22	29·832
	11. 8. 16	29·542		10. 3. 30:	29·202		5. 12. 0:	30·185		7. 4. 15	29·870
	13. 15. 0:	29·344		12. 9. 0:	29·005		10. 21. 0	30·236		11. 9. 0	30·191
	17. 0. 0	30·056		14. 21. 20:	29·080		12. 22. 15:	30·318		15. 8. 4:	29·968
	19. 10. 15:	29·966		18. 3. 0:	29·790		16. 0. 20:	30·058		17. 21. 23	29·614
	24. 22. 25:	30·388		20. 2. 28	29·680		18. 22. 30	29·832		20. 7. 33:	29·593
	26. 21. 10:	30·257		26. 3. 0	30·137		20. 22. 25	29·640		21. 23. 8	29·315
	31 11. 18:	30·099		29. 4. 0:	29·649		24. 0. 15	29·973		24. 23. 23	29·750
							26. 12. 0:	30·072			

MAXIMA AND MINIMA READINGS OF THE BAROMETER—*concluded.*

MAXIMA.		MINIMA.		MAXIMA.		MINIMA.	
Approximate Mean Solar Time, 1863.	Reading.	Approximate Mean Solar Time, 1863.	Reading.	Approximate Mean Solar Time, 1863.	Reading.	Approximate Mean Solar Time, 1863.	Reading.
d h m	in.	d h m	in.	d h m	in.	d h m	in.
July 30. 13. 24:	30·143	July 29. 3. 31:	29·837	October 20. 21. 0	30·032	October 15. 3. 0:	29·404
August 8. 22. 30	29·995	August 4. 11. 0:	29·707	23. 8. 0	30·135	22. 2. 0:	29·958
11. 12. 49	29·944	10. 17. 37:	29·836	29. 15. 30:	29·340	29. 3. 45	29·085
13. 12. 55:	29·915	13. 0. 22:	29·760	November 0. 21. 30	29·443	30. 3. 30	28·812
18. 13. 38:	29·783	17. 2. 41:	29·546	2. 21. 0	29·707	November 1. 21. 0	28·768
20. 21. 5	30·023	19. 6. 0	29·557	5. 23. 15	30·375	3. 4. 59:	29·553
25. 19. 50:	29·383	25. 10. 12:	29·295	9. 3. 8	30·097	8. 2. 30:	29·560
29. 22. 30	29·739	26. 19. 0:	29·203	13. 9. 30:	30·140	11. 0. 0	29·194
September 0. 22. 15:	29·937	30. 21. 47	29·523	17. 21. 45:	30·115	16. 19. 18:	29·974
3. 21. 25	29·760	September 3. 0. 0:	29·589	26. 15. 0:	30·230	21. 4. 52	29·406
6. 0. 28	29·794	5. 5. 15:	29·522	December 2. 10. 37:	29·376	December 2. 0. 8	28·828
8. 0. 0	29·831	6. 19. 10:	29·335	4. 0. 0	30·217	2. 19. 50	28·796
13. 22. 15:	30·200	9. 11. 0:	29·592	6. 23. 43	30·258	5. 2. 13	29·915
16. 21. 0	29·984	15. 18. 32	29·869	13. 23. 0	30·294	8. 19. 45:	29·852
26. 14. 18:	30·065	22. 3. 14	28·780	18. 5. 22:	30·345	16. 15. 2:	29·605
28. 21. 0:	29·899	27. 21. 20	29·560	22. 9. 56:	30·096	21. 19. 5:	29·600
October 4. 13. 10:	29·890	October 1. 2. 25	29·040	24. 10. 30:	30·128	23. 3. 34:	29·813
10. 1. 25	29·554	9. 14. 18:	29·354	27. 22. 9:	30·183	26. 15. 30:	29·674
11. 5. 20:	29·490	10. 17. 50:	29·328	29. 22. 8	29·997	29. 1. 38	29·675
14. 10. 36:	29·575	13. 0. 35	29·142			31. 11. 30:	29·547

MONTHLY MEANS of RESULTS for METEOROLOGICAL ELEMENTS at the ROYAL OBSERVATORY, GREENWICH, in the Year 1863.

1863, MONTH.	Mean Reading of the Barometer.	TEMPERATURE OF THE AIR. Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Mean Temperature.	Mean Temperature of Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required to saturate a Cubic Foot of Air.
	in.	°	°	°	°	°	°	°	°	in.	gr.	gr.
January ..	29·621	55·2	27·7	27·5	46·9	36·6	10·3	41·8	37·6	0·225	2·6	0·5
February..	30·141	55·7	27·2	28·5	49·5	35·7	13·8	42·1	37·9	0·228	2·6	0·5
March	29·715	64·0	28·1	35·9	53·7	35·7	18·0	43·9	37·6	0·225	2·6	0·7
April	29·813	69·3	28·3	41·0	61·2	40·1	21·1	49·1	42·7	0·274	3·1	0·9
May	29·857	79·7	31·4	48·3	64·4	42·7	21·7	52·0	45·2	0·302	3·4	1·0
June	29·727	84·0	42·1	41·9	70·1	50·1	20·0	58·1	50·2	0·364	4·1	1·4
July.....	29·961	86·0	38·7	47·3	74·3	49·4	24·9	60·8	51·7	0·384	4·3	1·7
August ...	29·744	84·9	46·0	38·9	73·8	53·7	20·1	61·9	53·6	0·412	4·5	1·6
September.	29·693	71·8	35·0	36·8	63·5	45·8	17·7	53·7	46·8	0·321	3·6	1·1
October...	29·638	66·5	34·0	32·5	58·8	46·1	12·7	51·6	47·8	0·333	3·7	0·6
November .	29·870	60·8	28·1	32·7	51·1	40·3	10·8	45·7	42·4	0·271	3·1	0·5
December .	29·942	54·2	26·5	27·7	48·6	36·8	11·8	43·2	38·5	0·233	2·7	0·5
Means	29·810	69·3	32·7	36·6	59·7	42·8	16·9	50·3	44·3	0·298	3·4	0·9

1863, MONTH.	Mean Degree of Humidity. (Sat. = 100.)	Mean Weight of a Cubic Foot of Air.	Mean Amount of Cloud. 0 - 10	RAIN. Number of Rainy Days.	Amount collected on the Ground. Gauge read daily.	Gauge read Monthly.	WIND. From Osler's Anemometer. Number of Days for Mean Direction of the Wind referred to different Points of Azimuth. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of Calm Days and Days on which the Pressure of the Wind was less than ½ lb. on the Sq. Foot.	Mean Daily Pressure in lbs. on Square Foot.	From Robinson's Anemometer. Mean Daily Horizontal Movement of the Wind in Miles.
		gr.			in.	in.											
January.....	85	547	7·3	16	2·7	2·6	1	4	1	2	3	14	3	2	1	1·68	370
February.....	86	537	6·5	9	0·5	0·6	1	1	2	3	0	13	4	2	2	0·33	244
March	78	547	6·4	10	0·7	0·7	3	3	1	2	2	6	5	5	4	0·36	237
April.....	78	543	6·6	9	0·4	0·4	2	4	2	1	1	9	4	5	2	0·44	257
May.....	78	540	6·2	10	1·3	1·2	2	11	3	1	0	7	5	2	0	0·23	239
June.....	75	531	7·2	14	3·9	3·9	2	2	1	3	1	11	8	2	0	0·09	151
July.....	72	532	5·0	3	0·9	0·9	5	5	2	3	2	5	4	2	3	0·04	148
August	74	527	7·0	13	1·8	1·8	1	1	2	1	2	17	4	2	1	0·18	248
September.....	77	535	6·9	14	3·0	3·1	0	0	0	0	3	16	9	1	1	0·17	259
October.....	87	537	7·2	17	1·8	1·7	1	1	3	5	3	13	1	0	4	0·19	226
November.....	88	547	7·0	11	1·6	1·8	2	1	2	3	4	14	3	1	0	0·15	258
December	83	552	6·8	8	1·1	1·1	1	0	1	0	1	13	10	4	1	0·34	331
Means.....	80	541	6·7	Sum 134	Sum 19·7	Sum 19·8	Sum 21	Sum 33	Sum 20	Sum 24	Sum 22	Sum 138	Sum 60	Sum 28	Sum 19	..	..

From June 4 to 23 Robinson's Anemometer was not in action. The mean daily horizontal movement of the air for the month of June has been formed from the remaining 10 days.

READINGS OF THERMOMETERS SUNK IN THE GROUND.

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day, except Sundays, Good Friday, and Christmas Day.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	▫	°	°
1	51·46	*S*	*S*	49·43	48·96	48·83	49·09	49·68	50·52	51·31	*S*	51·97
2	51·43	50·73	50·07	49·42	48·95	48·85	49·09	*S*	50·54	51·34	51·84	51·97
3	51·40	50·71	50·05	GoodFriday.	*S*	48·87	49·12	49·74	50·58	51·37	51·84	51·97
4	*S*	50·68	50·03	49·38	48·93	48·86	49·13	49·76	50·60	*S*	51·90	51·97
5	51·37	50·60	50·00	*S*	48·94	48·85	*S*	49·77	50·63	51·42	51·90	51·98
6	51·35	50·65	49·97	49·34	48·92	48·85	49·16	49·80	*S*	51·42	51·89	*S*
7	51·31	50·62	49·94	49·32	48·90	*S*	49·19	49·85	50·68	51·45	51·88	51·97
8	51·31	*S*	*S*	49·30	48·90	48·84	49·20	49·87	50·72	51·49	*S*	51·96
9	51·26	50·54	49·88	49·30	48·90	48·87	49·22	*S*	50·74	51·48	51·90	51·97
10	51·25	50·53	49·87	49·28	*S*	48·87	49·24	49·94	50·76	51·53	51·88	51·96
11	*S*	50·51	49·83	49·26	48·88	48·87	49·26	49·96	50·80	*S*	51·90	51·95
12	51·15	50·48	49·82	*S*	48·85	48·88	*S*	49·98	50·83	51·57	51·90	51·94
13	51·15	50·40	49·80	49·23	48·86	48·89	49·28	50·00	*S*	51·57	51·93	*S*
14	51·13	50·43	49·78	49·20	48·85	*S*	49·30	50·04	50·87	51·62	51·94	51·92
15	51·10	*S*	*S*	49·20	48·85	48·92	49·32	50·13	50·92	51·62	*S*	51·90
16	51·08	50·36	49·75	49·18	48·84	48·93	49·34	*S*	50·95	51·64	51·97	51·88
17	51·05	50·35	49·72	49·16	*S*	48·93	49·35	50·11	50·97	51·66	51·97	51·88
18	*S*	50·32	49·68	49·15	48·84	48·94	49·35	50·11	50·99	*S*	51·97	51·87
19	51·05	50·29	49·68	*S*	48·80	48·92	*S*	50·12	51·00	51·70	51·97	51·87
20	51·02	50·28	49·66	49·12	48·81	48·95	49·40	50·16	*S*	51·72	51·98	*S*
21	51·00	50·25	49·64	49·10	48·82	*S*	49·40	50·20	51·06	51·73	51·98	51·86
22	50·95	*S*	*S*	49·17	48·81	48·97	49·44	50·24	51·08	51·75	*S*	51·84
23	50·95	50·22	49·62	49·06	48·81	49·00	49·46	*S*	51·12	51·74	51·98	51·83
24	50·95	50·19	49·60	49·05	*S*	49·00	49·48	50·30	51·13	51·73	52·00	51·83
25	*S*	50·15	49·57	49·04	48·81	49·02	49·52	50·33	51·18	*S*	52·02	ChristmasDay.
26	50·90	50·15	49·55	*S*	48·81	49·02	*S*	50·35	51·21	51·77	52·00	51·83
27	50·83	50·13	49·52	49·05	48·83	49·03	49·57	50·38	*S*	51·77	51·98	*S*
28	50·90	50·09	49·51	48·95	48·83	*S*	49·59	50·42	51·23	51·80	51·98	51·75
29	50·78		*S*	48·97	48·84	49·05	49·61	50·45	51·27	51·80	*S*	51·78
30	50·81		49·46	48·96	48·81	49·07	49·63	*S*	51·30	51·82	51·96	51·75
31	50·77		49·45		*S*		49·66	50·48		51·83		51·73
Means.	51·10	50·40	49·75	49·18	48·86	48·93	49·35	50·08	50·91	51·62	51·94	51·87

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	▫	°	°	°	°	°	°	°	°	°	°	°
1	49·58	*S*	*S*	46·53	47·38	49·06	51·12	53·73	55·30	55·33	*S*	52·56
2	49·50	47·88	47·07	46·52	47·45	49·12	51·19	*S*	55·29	55·30	54·30	52·52
3	49·42	47·84	47·05	GoodFriday.	*S*	49·20	51·30	53·82	55·39	55·28	54·24	52·45
4	*S*	47·79	47·01	46·53	47·55	49·20	51·40	53·89	55·39	*S*	54·32	52·40
5	49·33	47·75	47·00	*S*	47·65	49·25	*S*	53·89	55·40	55·22	54·23	52·35
6	49·26	47·74	46·95	46·54	47·67	49·28	51·58	53·95	*S*	55·17	54·16	*S*
7	49·20	47·70	46·92	46·55	47·70	*S*	51·68	54·05	55·43	55·17	54·12	52·25
8	49·15	*S*	*S*	46·55	47·77	49·40	51·75	54·10	55·46	55·14	*S*	52·17
9	49·10	47·60	46·86	46·56	47·85	49·47	51·84	*S*	55·47	55·06	53·88	52·15
10	49·05	47·60	46·85	46·59	*S*	49·52	51·95	54·25	55·46	55·05	53·88	52·05
11	*S*	47·58	46·84	46·60	47·93	49·60	52·02	54·26	55·50	*S*	53·84	52·02
12	48·83	47·55	46·83	*S*	47·95	49·68	*S*	54·28	55·53	54·99	53·76	51·96

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12 French feet—*concluded.*

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	48·78	47·54	46·80	46·63	48·03	49·75	52·15	54·34	*S*	54·91	53·77	*S*
14	48·78	47·53	46·84	46·64	48·07	*S*	52·25	54·40	55·50	54·94	53·71	51·77
15	48·70	*S*	*S*	46·66	48·16	49·93	52·35	54·47	55·53	54·87	*S*	51·75
16	48·63	47·42	46·80	46·71	48·20	49·99	52·38	*S*	55·56	54·82	53·61	51·70
17	48·53	47·46	46·80	46·73	*S*	50·05	52·50	54·54	55·52	54·84	53·53	51·60
18	*S*	47·45	46·75	46·77	48·32	50·15	52·55	54·55	55·54	*S*	53·44	51·51
19	48·60	47·41	46·76	*S*	48·32	50·14	*S*	54·60	55·60	54·77	53·40	51·50
20	48·52	47·39	46·75	46·85	48·40	50·29	52·78	54·66	*S*	54·75	53·34	*S*
21	48·42	47·37	46·73	46·88	48·48	*S*	52·83	54·77	55·50	54·70	53·26	51·37
22	48·28	*S*	*S*	46·91	48·54	50·42	52·93	54·85	55·45	54·70	*S*	51·30
23	48·23	47·32	46·70	46·96	48·62	50·51	53·04	*S*	55·45	54·63	53·09	51·25
24	48·30	47·28	46·69	47·01	*S*	50·56	53·12	54·97	55·43	54·54	53·06	51·18
25	*S*	47·18	46·65	47·08	48·72	50·65	53·28	55·05	55·45	*S*	52·98	Christmas Day.
26	48·17	47·20	46·63	*S*	48·76	50·72	*S*	55·05	55·46	54·53	52·87	51·09
27	48·03	47·18	46·60	47·20	48·86	50·79	53·42	55·11	*S*	54·45	52·81	*S*
28	47·92	47·07	46·59	47·20	48·91	*S*	53·50	55·18	55·34	54·50	52·78	50·90
29	47·95		*S*	47·28	48·98	50·95	53·55	55·20	55·37	54·47	*S*	50·90
30	48·00		46·53	47·32	49·01	51·04	53·60	*S*	55·40	54·38	52·60	50·81
31	47·95		46·52		*S*		53·65	55·26		54·42		50·72
Means.	48·68	47·49	46·79	46·79	48·20	49·95	52·43	54·51	55·45	54·85	53·56	51·70

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	47·32	*S*	*S*	46·10	49·39	51·62	55·97	58·22	59·27	56·71	*S*	51·54
2	47·33	46·00	45·55	46·20	49·46	51·85	56·02	*S*	59·22	56·56	54·53	51·44
3	47·30	46·03	45·59	Good Friday.	*S*	52·10	56·10	58·32	59·25	56·44	54·29	51·29
4	*S*	46·04	45·61	46·37	49·50	52·25	56·20	58·40	59·18	*S*	54·18	51·07
5	47·28	46·08	45·70	*S*	49·57	52·40	*S*	58·42	59·12	56·30	53·93	50·90
6	47·20	46·12	45·75	46·46	49·60	52·60	56·42	58·50	*S*	56·23	53·77	*S*
7	47·12	46·13	45·82	46·40	49·73	*S*	56·58	58·67	59·00	56·25	53·32	50·64
8	47·10	*S*	*S*	46·55	49·90	52·97	56·67	58·72	58·95	56·22	*S*	50·53
9	47·04	46·20	45·98	46·63	50·00	53·11	56·84	*S*	58·88	56·10	53·47	50·40
10	47·00	46·29	46·03	46·63	*S*	53·20	57·00	58·91	58·75	56·07	53·33	50·40
11	*S*	46·30	46·05	46·80	50·34	53·31	57·20	58·98	58·70	*S*	53·30	50·38
12	46·62	46·30	46·00	*S*	50·50	53·40	*S*	59·09	58·65	56·00	53·14	50·30
13	46·70	46·25	45·93	47·09	50·58	53·49	57·50	59·23	*S*	55·93	53·04	*S*
14	46·28	46·24	45·77	47·28	50·64	*S*	57·65	59·37	58·40	55·95	52·81	50·18
15	46·18	*S*	*S*	47·46	50·76	53·69	57·84	59·49	58·32	55·90	*S*	50·16
16	46·12	46·10	45·58	47·64	50·83	53·71	57·95	*S*	58·27	55·84	52·40	50·11
17	46·08	46·04	45·62	47·78	*S*	53·82	58·07	59·61	58·13	55·82	52·22	49·94
18	*S*	45·94	45·55	47·94	51·02	53·95	58·12	59·62	58·07	*S*	52·07	49·93
19	46·05	45·80	45·53	*S*	51·02	53·96	*S*	59·68	58·08	55·72	52·04	49·88
20	46·00	45·69	45·50	48·23	51·12	54·34	58·34	59·72	*S*	55·68	52·00	*S*
21	45·90	45·58	45·40	48·38	51·18	*S*	58·28	59·78	57·88	55·63	51·93	49·63
22	45·60	*S*	*S*	48·50	51·20	54·52	58·30	59·77	57·79	55·63	*S*	49·52
23	45·50	45·47	45·37	48·61	51·21	54·68	58·35	*S*	57·76	55·58	51·84	49·40
24	45·88	45·44	45·35	48·73	*S*	54·81	58·30	59·60	57·68	55·53	51·83	49·29
25	*S*	45·37	45·40	48·83	51·15	54·94	58·30	59·52	57·60	*S*	51·76	Christmas Day.
26	45·80	45·40	45·50	*S*	51·15	55·15	*S*	59·42	57·48	55·50	51·66	49·07

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6 French feet—*concluded.*

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
27	45·80	45·48	45·60	49·00	51·20	55·33	58·25	59·43	*S*	55·37	51·64	*S*
28	45·80	45·43	45·70	49·03	51·25	*S*	58·20	59·44	57·00	55·30	51·67	48·83
29	45·83		*S*	49·17	51·30	55·70	58·20	59·39	57·00	55·16	*S*	48·83
30	45·97		45·87	49·28	51·35	55·86	58·15	*S*	56·90	54·98	51·60	48·72
31	45·94		46·00		*S*		58·17	59·29		54·86		48·65
Means .	46·40	45·91	45·68	47·64	50·58	53·72	57·52	59·18	58·28	55·82	52·71	50·04

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at the same times.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	44·50	*S*	*S*	45·45	49·80	54·03	58·80	60·61	60·62	54·96	*S*	48·34
2	44·43	43·82	43·40	45·40	49·52	54·20	58·83	*S*	60·35	55·05	51·55	47·73
3	44·35	43·79	43·60	Good Friday	*S*	54·62	59·10	60·90	60·21	55·11	51·06	47·81
4	*S*	43·98	43·91	45·34	49·80	55·05	59·30	61·10	60·02	*S*	50·93	47·69
5	44·35	43·84	44·20	*S*	50·40	55·53	*S*	61·12	59·99	55·52	51·02	47·24
6	44·30	43·95	44·40	45·54	50·83	55·62	59·75	61·26	*S*	55·52	51·40	*S*
7	44·30	44·20	44·64	45·65	51·10	*S*	60·15	61·44	59·42	55·30	51·31	47·36
8	44·17	*S*	*S*	45·92	51·44	55·40	60·45	61·50	59·31	55·02	*S*	47·30
9	43·80	44·60	44·42	45·98	51·60	55·35	60·80	*S*	59·07	55·08	51·13	47·49
10	43·42	44·20	44·04	46·28	*S*	55·30	61·18	62·16	59·00	55·27	50·86	47·56
11	*S*	43·92	43·66	46·81	51·80	55·40	61·30	62·45	58·84	*S*	50·33	47·54
12	42·80	43·90	43·35	*S*	51·78	55·50	*S*	62·17	58·50	55·30	49·68	47·42
13	42·45	43·83	42·95	47·82	51·80	55·51	61·70	62·83	*S*	55·22	49·17	*S*
14	42·55	43·59	42·81	48·10	51·83	*S*	62·00	62·88	58·12	55·20	48·62	47·52
15	42·55	*S*	*S*	48·25	51·83	55·70	62·10	62·96	58·05	55·08	*S*	47·30
16	42·40	42·87	42·80	48·36	52·02	55·95	61·99	*S*	57·98	54·98	48·75	47·11
17	42·30	42·60	42·84	48·63	*S*	56·18	62·03	63·02	57·80	54·95	48·95	47·02
18	*S*	42·30	42·70	49·00	52·11	56·43	61·70	62·88	57·83	*S*	49·16	46·80
19	42·30	42·02	42·52	*S*	52·04	56·69	*S*	62·50	57·94	54·86	49·40	46·45
20	42·43	42·02	42·38	49·20	51·90	56·98	61·00	62·04	*S*	54·97	49·48	*S*
21	42·62	42·25	42·53	49·30	51·54	*S*	60·73	61·61	57·91	55·11	49·42	46·00
22	42·38	*S*	*S*	49·30	51·51	57·33	60·53	61·15	57·58	55·24	*S*	45·90
23	42·55	42·55	43·07	49·41	51·28	57·70	60·48	*S*	57·28	55·27	49·24	45·80
24	43·20	42·59	43·50	49·43	*S*	58·04	60·22	60·95	56·84	55·00	49·20	45·40
25	*S*	42·70	43·96	49·35	51·58	58·55	60·09	61·14	56·50	*S*	49·30	Christmas Day
26	43·10	43·00	44·30	*S*	51·34	59·09	*S*	61·01	56·15	54·15	49·56	45·33
27	43·00	43·19	44·50	49·80	51·45	59·18	59·88	60·82	*S*	53·60	49·71	*S*
28	43·20	43·36	44·60	49·95	51·63	*S*	59·80	60·75	55·50	53·30	49·80	45·53
29	43·00		*S*	50·14	52·14	59·10	59·96	60·66	55·45	53·02	*S*	45·30
30	43·19		45·06	50·05	52·83	58·93	60·21	*S*	55·27	52·85	49·00	45·21
31	43·53		45·39		*S*		60·50	60·69		52·58		45·28
Means .	43·23	43·29	43·67	47·94	51·42	56·44	60·54	61·64	57·83	54·72	50·92	46·75

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the case which covers the tops of the deep-sunk Thermometers, at the same times.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	46·5	*S*	*S*	45·5	49·0	57·5	61·5	63·6	58·9	55·4	*S*	48·0
2	46·0	45·9	47·0	45·5	51·0	59·5	63·2	*S*	60·2	55·0	48·0	48·0
3	42·5	47·0	47·0	Good Friday.	*S*	63·0	62·8	66·3	61·2	56·6	45·0	45·5
4	*S*	43·1	49·0	48·1	55·5	63·0	63·2	66·5	60·9	*S*	55·5	40·0
5	45·0	45·3	47·0	*S*	56·5	60·5	*S*	63·6	59·2	54·3	53·0	45·0
6	43·5	47·5	48·6	49·8	55·6	58·9	65·4	64·2	*S*	51·5	49·0	*S*
7	41·5	48·0	46·1	48·4	55·7	*S*	67·5	67·2	59·4	54·3	48·2	48·0
8	42·0	*S*	*S*	47·0	54·0	57·0	66·0	68·0	57·8	57·6	*S*	48·2
9	39·4	40·8	41·0	51·0	55·5	58·0	66·3	*S*	59·0	55·0	47·6	49·5
10	40·5	43·2	40·5	52·9	*S*	58·7	66·4	68·4	59·5	57·0	43·8	48·0
11	*S*	44·1	41·0	52·7	54·9	58·3	68·0	67·3	60·0	*S*	43·5	48·0
12	40·0	44·2	41·5	*S*	54·5	57·7	*S*	65·7	60·0	57·0	42·6	48·5
13	43·0	40·5	40·5	52·3	55·5	57·1	66·3	66·5	*S*	55·3	40·0	*S*
14	40·5	40·9	42·5	50·5	54·4	*S*	64·0	66·5	56·5	56·8	48·2	45·4
15	41·0	*S*	*S*	51·3	56·2	61·2	65·9	67·8	57·0	50·5	*S*	48·3
16	39·8	38·4	42·7	53·0	55·0	60·7	65·1	*S*	58·3	54·8	49·8	48·3
17	39·8	41·0	41·8	52·7	*S*	60·1	62·7	65·3	57·0	56·0	50·0	44·8
18	*S*	38·0	40·3	54·0	55·7	61·4	60·7	61·4	58·0	*S*	49·3	42·0
19	43·5	40·5	42·5	*S*	50·1	58·2	*S*	59·2	61·0	57·0	49·2	44·2
20	42·0	42·3	44·0	53·3	50·4	61·0	61·7	60·0	*S*	57·0	45·6	*S*
21	42·0	40·8	45·5	53·0	52·7	*S*	61·0	59·4	56·0	56·3	50·3	45·0
22	45·5	*S*	*S*	53·5	51·0	62·2	62·5	61·2	55·0	58·0	*S*	43·7
23	47·0	42·4	46·8	51·3	51·4	63·2	60·8	*S*	54·0	53·5	48·3	41·2
24	44·8	44·8	48·3	50·5	*S*	63·8	60·3	64·2	54·0	49·2	52·0	44·0
25	*S*	43·9	47·3	53·1	52·8	64·0	63·0	62·9	54·0	*S*	52·3	Christmas Day
26	44·7	44·8	48·5	*S*	52·1	63·9	*S*	60·0	53·0	48·5	51·0	48·2
27	44·8	46·0	46·0	55·0	54·4	61·8	70·6	61·2	*S*	58·2	49·5	*S*
28	40·5	43·6	48·7	51·8	57·0	*S*	62·7	62·3	54·0	51·8	45·8	40·4
29	46·0		*S*	50·6	59·9	61·1	63·8	61·5	52·8	51·0	*S*	46·5
30	47·2		48·8	49·5	62·1	61·5	63·3	*S*	62·0	50·0	42·3	44·1
31	47·0		47·5		*S*		62·2	61·7		48·0		41·3
Means.	43·2	43·2	45·0	51·1	54·3	60·5	64·0	63·9	57·6	54·3	48·0	45·6

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at the same times.

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·5	*S*	*S*	53·0	56·6	64·3	69·0	72·5	63·0	56·9	*S*	46·0
2	43·5	48·8	51·5	55·3	60·5	69·8	67·5	*S*	61·0	55·5	47·8	50·0
3	42·3	48·9	57·5	Good Friday.	*S*	68·3	68·0	72·1	66·7	59·0	45·0	44·5
4	*S*	45·5	56·5	53·6	61·7	70·5	69·7	73·6	63·0	*S*	58·0	45·0
5	46·5	47·5	57·7	*S*	68·0	63·6	*S*	65·3	63·5	55·7	55·0	50·3
6	45·5	50·4	52·3	54·6	64·5	61·0	74·2	66·3	*S*	52·6	50·6	*S*
7	41·5	50·6	48·4	51·4	59·5	*S*	80·8	75·4	62·8	59·5	49·5	49·8
8	45·0	*S*	*S*	49·0	61·0	61·0	73·5	73·3	62·7	64·2	*S*	48·3
9	40·5	40·5	42·0	55·7	66·9	61·8	74·5	*S*	63·0	53·0	48·2	51·5
10	40·3	44·5	43·3	59·7	*S*	60·8	78·5	75·7	57·7	61·3	41·5	46·4
11	*S*	45·0	38·9	57·2	61·5	61·8	77·2	73·6	58·8	*S*	41·0	48·3
12	38·8	46·7	42·4	*S*	55·6	62·0	*S*	72·7	63·8	58·9	42·6	51·1
13	42·5	44·7	41·5	56·6	59·5	61·8	71·3	75·0	*S*	55·2	46·2	*S*
14	38·5	43·8	47·8	52·7	61·1	*S*	73·4	73·5	58·0	61·7	49·7	47·2
15	40·7	*S*	*S*	59·8	59·1	67·9	75·3	75·8	58·8	57·0	*S*	46·5

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers—*concluded.*

Day of the Month, 1863.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	40·0	44·6	45·2	62·2	59·3	64·5	67·2	*S*	64·2	57·6	53·5	49·0
17	40·0	44·9	44·5	58·7	*S*	66·2	68·4	70·5	61·0	60·9	51·7	44·6
18	*S*	41·0	42·5	60·5	63·6	68·5	59·2	61·3	63·2	*S*	51·0	40·0
19	47·0	42·5	47·4	*S*	46·1	57·8	*S*	55·4	70·5	60·7	52·0	45·8
20	42·5	41·7	49·0	62·5	51·3	65·9	67·0	60·0	*S*	59·5	51·3	*S*
21	44·7	43·3	49·0	58·1	55·0	*S*	62·2	64·3	58·4	60·4	55·2	46·0
22	51·5	*S*	*S*	56·5	53·8	65·6	62·1	66·3	56·6	60·6	*S*	39·7
23	53·0	46·2	54·0	57·0	58·6	71·3	67·3	*S*	56·7	53·5	52·8	44·5
24	48·5	46·0	57·2	56·6	*S*	71·5	64·5	67·5	54·3	48·1	54·0	45·8
25	*S*	47·3	53·5	61·6	57·0	67·1	67·8	68·3	60·2	*S*	56·0	Christmas Day
26	47·0	48·5	55·6	*S*	56·2	71·6	*S*	61·3	60·8	52·5	51·6	51·0
27	45·8	50·0	52·0	65·7	66·2	62·5	70·5	65·1	*S*	57·8	48·4	*S*
28	44·5	47·7	55·5	50·3	67·0	*S*	72·7	69·5	52·2	54·7	45·4	36·2
29	52·5		*S*	50·7	72·4	67·0	72·0	65·6	58·5	50·9	*S*	49·9
30	50·6		50·5	50·7	71·5	66·4	70·0	*S*	60·0	50·4	40·7	43·5
31	47·3		50·7		*S*		69·8	65·0		51·5		39·6
Means .	44·9	45·9	49·5	56·4	60·5	65·4	70·2	68·7	60·7	56·6	49·5	46·2

Weekly Means of Readings of Thermometers.

1863. Period.	Thermometers sunk in the ground. Bulb 24 French Feet deep.	Bulb 12 French Feet deep.	Bulb 6 French Feet deep.	Bulb 3 French Feet deep.	Bulb 1 Inch deep.	Thermometer inclosed in the box which covers the scales of the deep-sunk Thermometers, and placed on a level with their scales.
	°	°	°	°	°	°
January 1 to January 7	51·39	49·38	47·26	44·37	44·2	45·0
8 to 14	51·21	48·95	46·79	43·20	40·9	40·9
15 to 21	51·05	48·57	46·06	42·43	41·4	42·5
22 to 28	50·91	48·16	45·73	42·91	44·6	48·4
29 to February 4	50·75	47·90	45·97	43·55	46·0	48·9
February 5 to 11	50·57	47·66	46·19	44·12	44·8	46·4
12 to 18	50·39	47·49	46·15	43·18	40·5	44·3
19 to 25	50·23	47·33	45·56	42·36	42·5	44·5
26 to March 4	50·09	47·10	45·51	43·41	46·2	52·0
March 5 to 11	49·92	46·90	45·89	44·23	44·0	47·1
12 to 18	49·76	46·80	45·74	42·91	41·6	44·0
19 to 25	49·63	46·71	45·43	42·99	45·7	51·7
26 to April 1	49·49	46·57	45·80	44·88	47·5	52·9
April 2 to 8	49·35	46·54	46·39	45·57	47·8	52·8
9 to 15	49·25	46·61	46·98	47·21	51·8	57·0
16 to 22	49·15	46·81	48·08	48·97	53·3	59·8
23 to 29	49·02	47·12	48·89	49·68	52·1	57·0
30 to May 6	48·94	47·50	49·47	50·07	52·9	60·3
May 7 to 13	48·88	47·87	50·18	51·59	55·0	60·7
14 to 20	48·83	48·25	50·90	51·96	53·6	56·8
21 to 27	48·82	48·66	51·18	51·45	52·4	57·8
28 to June 3	48·84	49·05	51·58	53·24	59·8	68·9
June 4 to 10	48·86	49·35	52·76	55·37	59·4	63·1
11 to 17	48·90	49·83	53·57	55·71	59·2	64·0
18 to 24	48·96	50·35	54·38	57·20	61·6	66·8
25 to July 1	49·05	50·88	55·49	58·94	62·3	67·3
July 2 to 8	49·15	51·48	56·33	59·60	64·7	72·3
9 to 15	49·27	52·09	57·34	61·51	66·3	75·0
16 to 22	49·38	52·66	58·18	61·33	62·3	64·4
23 to 29	49·54	53·32	58·27	60·07	63·5	69·1
30 to August 5	49·71	53·76	58·28	60·74	64·3	70·7
August 6 to 12	49·90	54·15	58·81	61·83	66·8	72·8
13 to 19	50·09	54·48	59·50	62·85	64·5	68·6
20 to 26	50·26	54·89	59·64	61·32	61·3	64·6
27 to September 2	50·47	55·22	59·34	60·65	61·0	64·9
September 3 to 9	50·66	55·42	59·06	59·67	59·6	63·6
10 to 16	50·86	55·51	58·52	58·42	58·6	60·2
17 to 23	51·04	55·51	57·95	57·72	56·8	61·1
24 to 30	51·22	55·41	57·28	55·95	55·0	57·7
October 1 to October 7	51·39	55·25	56·42	55·24	54·5	56·5
8 to 14	51·54	55·02	56·05	55·18	56·5	59·1
15 to 21	51·68	54·79	55·77	54·99	55·3	59·4
22 to 28	51·76	54·56	55·49	54·43	53·2	54·6
29 to November 4	51·84	54·36	54·67	52·00	49·6	50·6
November 5 to 11	51·89	54·02	53·52	51·01	47·5	47·6
12 to 18	51·95	53·64	52·61	49·06	46·7	49·1
19 to 25	51·99	53·19	51·90	49·34	49·6	53·6
26 to December 2	51·98	52·69	51·59	49·02	47·4	47·0
December 3 to 9	51·97	52·29	50·81	47·48	46·0	48·2
10 to 16	51·92	51·88	50·26	47·41	47·8	48·1
17 to 23	51·86	51·42	49·72	46·33	43·5	43·4
24 to 31	51·78	50·93	48·90	45·34	44·1	44·3

ABSTRACT OF THE CHANGES OF THE DIRECTION OF THE WIND, AS DERIVED FROM OSLER'S ANEMOMETER.

By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c., by *retrograde* is meant in the order N., W., S., E., N., &c.

1862. Dec. 31. 12. The direction of the wind was S.W.
1863. Jan. 31. 12. ,, ,, W.S.W., which implies a direct motion of $22\frac{1}{2}°$.
On Jan. 12. 22, $17^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on Jan. $13^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of January was $382\frac{1}{2}°$.

1863. Jan. 31. 12. The direction of the wind was W.S.W.
Feb. 28. 12. ,, ,, S.W., which implies a direct motion of $697\frac{1}{2}°$.
On Feb. 13. 22, $16^d.\ 22^h$, $19^d.\ 22^h$, $21^d.\ 22^h$, $24^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on Feb. $14^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1800°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of February was $2137\frac{1}{2}°$.

1863. Feb. 28. 12. The direction of the wind was S.W.
March 31. 12. ,, ,, S.E., which implies a retrograde motion of 810°.
On March 0. 22, the trace was shifted to the second set of lines downwards; and on March $9^d.\ 22^h$, $13^d.\ 2^h$, $13^d.\ 22^h$, $25^d.\ 19\frac{1}{2}^h$, $31^d.\ 1\frac{1}{2}^h$, to the next set of lines downwards; on March $10^d.\ 22^h$, $18^d.\ 3^h$, $25^d.\ 2\frac{1}{2}^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 2520°, and retrograde motion of 1080°.
Therefore the whole excess of direct motion in the month of March was 630°.

1863. March 31. 12. The direction of the wind was S.E.
April 30. 12. ,, ,, N.E., which implies a direct motion of 270°.
On April 2. 22, $13^d.\ 22^h$, $18^d.\ 22^h$, $19^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on April $1^d.\ 22^h$, $15^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1440°, and retrograde motion of 720°.
Therefore the whole excess of direct motion in the month of April was 990°.

1863. April 30. 12. The direction of the wind was N.E.
May 31. 12. ,, ,, E.S.E., which implies a direct motion of $67\frac{1}{2}°$.
On May 5. 22, $6^d.\ 2^h$, $8^d.\ 22^h$, $9^d.\ 22^h$, $19^d.\ 22^h$, $26^d.\ 21^h$, the trace was shifted to the next set of lines downwards; on May $1^d.\ 2\frac{1}{2}^h$, $1^d.\ 22^h$, $18^d.\ 22^h$, $23^d.\ 2^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 2160°, and retrograde motion of 1440°.
Therefore the whole excess of direct motion in the month of May was $787\frac{1}{2}°$.

1863. May 31. 12. The direction of the wind was E.S.E.
June 30. 12. ,, ,, W.S.W., which implies a retrograde motion of 225°.
On June 0. 22, $1^d.\ 22^h$, $2^d.\ 3^h$, $10^d.\ 22^h$, $25^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on June $1^d.\ 1\frac{1}{2}^h$, $12^d.\ 22^h$, $19^d.\ 22^h$, $23^d.\ 3^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1800°, and retrograde motion of 1440°.
Therefore the whole excess of direct motion in the month of June was 135°.

1863. June 30. 12. The direction of the wind was W.S.W.
July 31. 12. ,, ,, E.S.E., which implies a direct motion of 225°.
On July 6. $1\frac{1}{2}$, $6^d.\ 18\frac{1}{2}^h$, $14^d.\ 22^h$, $16^d.\ 22^h$, $20^d.\ 22^h$, $27^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying direct motion of 2160°.
Therefore the whole excess of direct motion in the month of July was 2385°.

1863. July 31. 12. The direction of the wind was E.S.E.
Aug. 31. 12. ,, ,, W.S.W., which implies a retrograde motion of 225°.
On Aug. 2. 1, the trace was shifted to the next set of lines downwards; and on Aug. 13d. 22h, to the second set of lines downwards, implying direct motion of 1080°.
Therefore the whole excess of direct motion in the month of August was 855°.

1863. Aug. 31. 12. The direction of the wind was W.S.W.
Sept. 30. 12. ,, ,, S., which implies a retrograde motion of $67\frac{1}{2}$°.
On Sept. 13. 22, 30d. 8h, the trace was shifted to the next set of lines downwards; on Sept. 29d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of September was $292\frac{1}{2}$°.

1863. Sept. 30. 12. The direction of the wind was S.
Oct. 31. 12. ,, ,, W.S.W., which implies a direct motion of $67\frac{1}{2}$°.
On Oct. 7. $2\frac{1}{2}$, 8d. 22h, 15d. 18h, 20d. 22h, 22d. 22h, 24d. 22h, 26d. 22h, the trace was shifted to the next set of lines downwards; on Oct. 8d. $2\frac{1}{2}$h, 14d. 22h, 25d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 2520°, and retrograde motion of 1080°.
Therefore the whole excess of direct motion in the month of October was $1507\frac{1}{2}$°.

1863. Oct. 31. 12. The direction of the wind was W.S.W.
Nov. 30. 12. ,, ,, E.S.E., which implies a direct motion of 225°.
On Nov. 6. 22, 9d. 22h, 28d. 3h, the trace was shifted to the next set of lines downwards; on Nov. 10d. 22h, 27d. 22h, 29d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 1080°.
Therefore the whole excess of direct motion in the month of November was 225°.

1863. Nov. 30. 12. The direction of the wind was E.S.E.
Dec. 31. 12. ,, ,, E.N.E., which implies a retrograde motion of 405°.
On Dec. 0. 22, the trace was shifted to the next set of lines downwards, implying direct motion of 360°.
Therefore the whole excess of retrograde motion in the month of December was 45°.

The whole excess of direct motion to the end of the year was $10282\frac{1}{2}$°.

The revolution-counter which is attached to the vertical spindle of the vane, whose readings increase with change of direction of the wind in the order N., E., S., W., &c., or in *direct* motion, and decrease with change of direction in the order N., W., S., E., &c. or in *retrograde* motion, gave the following readings:—

	revs.
On 1862, December 31d. 12h	67·70
On 1863, December 31d. 12h	96·15

Implying an excess of direct motion, during the year, of 28·45 revolutions, or 10242°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1863.

1863, MONTH.	Monthly Amount of Rain collected in each Gauge.							
	Self-registering Gauge of Osler's Anemometer.	Second Gauge at Osler's Anemometer.	On the Roof of the Octagon Room.	On the Roof of the Library.	On the Roof of the Photographic Thermometer Shed.	Crosley's.	Cylinder partly sunk in the Ground read daily.	Cylinder partly sunk in the Ground read Monthly.
	in.	in.	in.	in.	in.	in.	in.	in.
January	1·6	1·5	1·9	1·8	2·6	2·0	2·7	2·6
February	0·3	0·3	0·4	0·4	0·5	0·4	0·5	0·6
March	0·5	0·4	0·5	0·5	0·7	0·5	0·7	0·7
April	0·2	0·2	0·3	0·3	0·4	0·5	0·4	0·4
May	0·6	0·6	0·7	0·9	1·2	1·0	1·3	1·2
June	2·9	2·9	3·2	3·3	3·9	3·2	3·9	3·9
July	0·6	0·7	0·8	0·7	0·8	0·8	0·9	0·9
August	1·2	1·2	1·5	1·5	1·8	1·6	1·8	1·8
September	1·9	1·9	2·4	2·3	2·9	2·5	3·0	3·1
October	1·1	1·0	1·2	1·4	1·7	1·6	1·8	1·7
November	0·9	0·8	1·1	1·0	1·5	1·2	1·6	1·8
December	0·6	0·5	0·6	0·7	1·1	0·8	1·1	1·1
Sums	12·4	12·0	14·6	14·8	19·1	16·1	19·7	19·8

The heights of the receiving surfaces are as follows:

	Above the Mean Level of the Sea. Ft.	In.		Above the Ground. Ft.	In.
The Two Gauges at Osler's Anemometer	205	6	.....	50	8
Gauge on the Roof of the Octagon Room	193	$2\frac{1}{2}$	.....	38	$4\frac{1}{2}$
Gauge on the Roof of the Library	177	2	.....	22	4
Gauge on the Roof of the Photographic Thermometer Shed	164	10	.....	10	0
Crosley's Gauge	156	6	.....	1	8
The Two Cylinder Gauges partly sunk in the Ground	155	3	.....	0	5

OBSERVATION OF THE EARTHQUAKE OF 1863, OCTOBER 6 (Civil Reckoning),

MADE WITH THE

TELESCOPE OF THE ALTAZIMUTH.

ON the morning of October 6, after having made the necessary observations of the Moon, and of a star for azimuthal position of the instrument, I was about to complete the series by the usual reference to the Collimator. I had, by the slow-motion screw of the instrument, brought the central bright spot of light of the Collimator (the mark to be observed) near to that horizontal wire by which it was to be bisected for an observation of altitude, and was preparing to make the bisection, when I beheld the spot of light with its fainter concentric rings all move together a small space downwards in the field of view, and remain stationary for a short but sensible space of time; the spot and rings then moved upwards to a little beyond the position (as it appeared to me) which they had at first occupied. It was impossible to make a bisection. The motion was entirely different from any flickering or quivering, having the opposite characteristic of steady motion, as of a pendulum in vibration, the spot of light and surrounding rings preserving most distinctly their relative positions throughout. The interval of time occupied by the motion was short, a very few seconds certainly. At about the time at which the spot of light reached, as above mentioned, its second extreme position, being unable to obtain a bisection, I took my eye off the telescope; and wondering somewhat at the circumstance, the motion (although so small) having a character so different from anything that I had ever before seen, I began to think that there must surely be some disturbance of the building itself; but I was not at the time led to reflect further on the circumstance, for on looking into the telescope again almost immediately, and finding the mark at rest in its first position, and perceiving afterwards no further motion, and being, moreover intent on completing the series of observations in hand, the occurrence did not become strongly fixed in my memory; and I did not indeed think more of it until tidings of an extensive shock of Earthquake having been experienced in the west of England on the morning of the 6th brought the whole train of circumstances vividly to remembrance, with the certain conviction that the anomalous appearance which I had seen was really produced by Earthquake motion.

The disturbance was in the vertical direction, and its extreme range I should judge (by the intervals between the horizontal wires of the instrument which afford so excellent a scale to which to refer such an observation) to have been from 12″ to 15″. No disturbance was remarked in the horizontal direction.

The time of the disturbance is fixed as follows:—It is known that the motion took place at the first observation of the Collimator. This is an observation at which accurate time is not taken, but by reference to the last preceding observation (one of azimuth of a star) made at $15^h.\ 18^m.$, and by record of the time of making the last (the fourth) observation of the Collimator, at $15^h.\ 35^m.$, it is assumed, considering the duration of time which each observation would occupy, that the disturbance occurred at October $5^d.\ 15^h.\ 23^m.$ Greenwich Mean Solar Time, without a greater error possibly than one minute of time.

WILLIAM ELLIS.

RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

1864.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1864.)

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GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS,

1864.

Introduction.

§ 1. *Restriction of Observations during the year* 1864.

In the month of January 1864, the excavation of a subterraneous room, below the former observing room or instrument-room of the Magnetic Observatory, and (like it) in the form of three arms of a cross, was begun. The finishing of the room, and the mounting in it of the Magnetic Instruments, were not completed till the summer. After that time, various experiments were tried and repeated changes were made, which destroyed the efficiency of the remaining months of the year. As none of the observations made in the room were entirely satisfactory, I have thought it best to suppress their printing, preserving them in manuscript for reference if necessary on any special points. The Dip-instrument and Deflexion-instrument, and the Meteorological instruments generally, were not affected by these operations, and observations were made with them as usual.

§ 2. *Dipping Needles, and Method of observing the Magnetic Dip.*

The instrument with which all the dips in the year 1864 have been observed, is that which, for distinction, is called Airy's instrument. The following description will probably suffice to convey an idea of its peculiarities :—

The form of the needles, the form of their axes, the form of the agate bearings, and the general arrangement of the relieving apparatus, are precisely the same as those in Robinson's and other needles. But the form of the observing apparatus is greatly modified, in order to secure the following objects :—

I. To obtain a microscopic view of the points of the needles, as in the instruments introduced by Dr. Lloyd and Major-General Sabine.

II. To possess at the same time the means of observing the needles while in a state of vibration.

III. To have the means of observing needles of different lengths.

IV. To give an illumination to the field of view of each microscope, directed from the side opposite to the observer's eye, so that the light may enter past the point of the needle into the object glass of the microscope, forming a black image of the needle-point in a bright field of view.

V. To give facility for observing by day or night.

With these views, the following form is given to the apparatus :—

The needle, and the bodies of the microscopes, are inclosed in a square box. The base of the box, two vertical sides, and the top, are made of gun-metal (carefully selected to insure its freedom from iron); but the sides parallel to the plane of vibration of the needle are of glass. Of the two glass sides, that which is next the observer is firmly fixed; it is hereafter called "the graduated glass-plate." The other glass side can be withdrawn, to open the box, for inserting the needle, &c.

An axis, whose length is perpendicular to the plane of vibration of the needles, and is as nearly as possible in the line of the axis of the needle, supported on two bearings (of which one is cemented in a hole in the graduated glass-plate, the other being upon a horizontal bar near to the agate support of the needle-axis), carries a transverse arm, about 11 inches long, or rather two arms, projecting about $5\frac{1}{2}$ inches on each side of the axis. Each of these projecting arms has a long opening, or slot, about 1 inch wide, extending from the neighbourhood of the center-work nearly to the end of the arm. Through this opening the tube of a microscope passes, in a direction parallel to the axis of the needle, and is firmly fixed by a shoulder-bearing on one side of the arm, and a circular nut, working in a thread cut upon the microscope-tube, on the other side of the arm. The microscope can thus be fixed at any distance from the central axis, within the limits of the length of the projecting arm. In 1863, between February 24 and May 11, the slot for a single moveable microscope on each side was changed for three fixed microscopes on each side, adapted in position to the lengths of the needles to be mentioned shortly.

The microscope-tube thus carried is not the entire microscope, but so much as contains the object-glass and the field-glass. Upon the plane side of the field-glass (which is turned towards the object-glass), a series of parallel lines is engraved by etching with fluoric acid. The object-glass is so adjusted that the image of the needle-point is formed upon the plane side of the field-glass; and thus the parallel lines can be used for observing the needle in a state of vibration; and, one of them being adopted as standard, the lines can be used for reference to the graduated circle (to be mentioned). All this requires that there be an eye-glass also for the microscope.

The axis of which we have spoken is continued through the graduated glass-plate, and there it carries another transverse arm parallel to the former, and generally similar to it. In each part of this slides a short eye-piece, carrying the eye-glass. In 1863,

at the time mentioned above, the slotted arm and moveable eye-socket were changed for an arm with three sockets and eye-glasses. Thus, reckoning from the observer's eye, there are the following parts :—

(1.) The eye-glass.

(2.) The graduated glass-plate (its graduations, however, not intervening in this part of the glass, the graduated circle being so large as to include all the microscopes).

(3.) The field-glass, on the further surface of which the parallel lines are engraved.

(4.) The object-glass.

(5.) The needle.

(6.) The removeable glass side of the box.

(7.) The illuminating reflector, to be described hereafter.

The optical part of the apparatus being thus described, we may proceed to speak of the graduated circle.

The graduations of the circle (whose diameter is about $9\frac{3}{4}$ inches) are etched on the inner surface of the graduated glass-plate. These divisions (as well as the parallel lines on the field glasses of the microscopes) are beautifully neat and regular, and are, I think, superior to any that I have seen on metal. The same piece of metal which carries the transverse arms supporting the microscope bodies carries also two arms with verniers for reading their graduations. These verniers (being adapted to transmitted light) are thin plates of metal, with notches instead of lines. The reading of the verniers is very easy. The portion of the axis which is external to the graduated glass-plate (towards the observer), and which has there, as already stated, two arms for carrying the microscope eye-glasses, has also two arms for carrying the lenses by which the verniers and glass-plate graduations are viewed. These four arms are the radii of a circle, which can be fixed in position by a clamp, attached to the gun-metal casing of the graduated glass-plate, and furnished with the usual slow-motion screw.

The entire system of the two arms carrying the microscope-bodies, the two arms carrying the microscope eye-glasses, the two arms carrying the verniers, and the two arms carrying the reading-glasses for the verniers, is turned rapidly by means of a button on the external side of the graduated glass-plate, or is moved slowly by means of the slow-motion screw just mentioned.

It now remains only to describe the illuminating apparatus. On the outside of the removeable glass plate, there are supports for the axis of a metallic circle turning in a plane parallel to the plane of needle-vibration. This circle has four slotted radii, and in these slots or openings there slide small frames carrying prismatic glass reflectors, each of which can turn on an axis, in the plane of the circle, but transverse to the radius. Two of these reflectors are for the purpose of sending light through the verniers, and therefore are fixed in radial distance; the other two were intended for sending light past the ends of the needle through the microscopes, and therefore required adjustment on change of needle and corresponding change of position

of microscopes. In 1863 these were changed for fixed reflectors, corresponding to the fixed microscopes. The circle was originally turned by a small winch near the observer's hand; at present, the winch is removed, as its axis was found to be slightly magnetic. At each observation, it is necessary to turn the circle which carries the reflectors; but this is the work of an instant.

The light which illuminates the whole is a gas-burner, in the line of the axis of rotation. Its rays fall upon the glass prisms, and each of these is adjusted, by turning on its axis, to throw the reflected light in the required direction.

The whole of the apparatus, as thus described, is planted upon a horizontal plate admitting of rotation in azimuth: the plate is graduated in azimuth, and verniers are fixed to the gun-metal tripod stand. The gas-pipe is led down the central vertical axis, and there communicates by a rotatory joint with the fixed gas-pipes.

The needles which are used with this instrument are—

B_1, a plain needle	each 9 inches long.
B_2, a plain needle	
B_3, a loaded needle with adjustible load	
B_4, a needle whose plane passes through the axis of the needle	
C_1, a plain needle	each 6 inches long.
C_2, a plain needle	
C_3, a loaded needle with adjustible load	
C_4, a needle whose plane passes through the axis of the needle	
D_1, a plain needle	each 3 inches long.
D_2, a plain needle	
D_3, a loaded needle with adjustible load	
D_4, a needle whose plane passes through the axis of the needle	

In discussing carefully the observations taken with this instrument (as well as with other dip-instruments), great trouble was experienced in determining the zenith-point (or reading of the vertical circle when the points of the needle are in the same vertical). To remedy this, a "zenith-point-needle" was constructed under my instructions by Mr. Simms; and it has been used as need required in 1864. It is a flat bar of brass; with pivots similar to those of the dip-needles; and with three pairs of points corresponding to the three lengths of needles used; loaded at one end so as to take a position perfectly definite with respect to the direction of gravity; observed with the microscopes, and reversed for another observation, exactly as the dip-needles. For each of the different lengths of dip-needles, the zenith-point is determined by observation of that pair of points of the zenith-point-needle whose interval is the same as the length of the dip-needle.

Discordances, of which no satisfactory explanation could be given, had been found in the ordinary use of the instrument for determination of dip, as well as in the change of readings when a needle was raised and lowered, and in the change of readings when, without raising the needle, the instrument was turned completely in azimuth. Between November 10 and November 19, Mr. Simms reground the agate edges on

which the needle-pivots rotate; and the discordances have entirely or in great measure disappeared. The process of regrinding was merely the following. A brass tool was provided which nearly fitted the agates, and which permitted lengthwise-strokes but scarcely permitted cross-strokes; and this tool carried, in succession, the different powders required for shaping and polishing the agate edges. As the edges were pretty well shaped, it was scarcely necessary to use coarse emery; but fine emery was used in the tool to give a final figure, and tin-oxide to give the ultimate polish. The process scarcely differs from that by which the edges had been ground originally; except that a tool had formerly been used which perhaps admitted of too much cross-stroke, and that rotten-stone powder had been used instead of tin-oxide.

The flat needles B_4, C_4, D_4, were used with the object of determining whether any part of the discordances of results arose from the position of the principal plane of the magnetized needle. But with the increased harmony of results, an error showed itself which is peculiar to their form. The small flexure of the needle, produced by the resolved part of gravity in the direction perpendicular to the needle's length, changes the position of its centre of gravity in such a manner that the action of gravity is necessarily opposed to that of the magnetic vertical force; and thus the apparent dip is made too small. This error is perhaps insensible in the 3-inch needle D_4, but it is visible in the 6-inch needle C_4, and conspicuous in the 9-inch needle B_4. In the tables of results, therefore, while I have included all the separate results from these needles, I have omitted them in the formation of means.

§ 3. *Observations for the absolute Measure of the Horizontal Force of Terrestrial Magnetism.*

In the spring of 1861, a Unifilar Instrument, similar in all respects (as is understood) to those used in and issued by the Kew Observatory, was procured by the courteous application of Major-General Sabine, from the makers, Messrs. J. T. Gibson and Son; and after having been subjected to the usual examinations, at the Kew Observatory, for determination of its constants (for which I am indebted to the kindness of Balfour Stewart, Esq.), was mounted at the Royal Observatory. Observations with this instrument commenced on 1861, June 11, and were continued through the year; and, after some slight modifications of its verniers, it is still maintained in use (1865).

The deflected magnet (whose use is merely to ascertain the proportion which the power of the deflecting magnet at a given distance bears to the power of terrestrial magnetism) is 3 inches long, carrying a small plane mirror. The deflecting magnet is 4 inches long; it is a hollow cylinder, carrying in its internal tube a collimator, by means of which its time of vibration is observed in another apparatus. The frame which supports the suspension-piece of the deflected magnet carries also the telescope directed to the magnet-mirror; it rotates round the vertical axis of a horizontal graduated circle whose external diameter is 10 inches. The deflecting magnet is

always placed on the E. or W. side of the deflected magnet, with one end towards the deflected magnet. In the reduction of the observations, the precepts contained in the Skeleton Form prepared by the Kew Observatory have received the strictest attention.

The following is the explanation of the method of reduction.

The distance of the centers of the deflected and deflecting magnet being r_0, it is supposed (from observations made at Kew, of which the details have not reached me) that the magnetism of the deflecting magnet is so altered by induction that the following multipliers ought to be used in computing the Absolute Force:—

At distance 1·0 foot, factor is	1·00031
1·1	1·00023
1·2	1·00018
1·3	1·00014
1·4	1·00011
1·5	1·00009

The correction of the magnetic power for temperature t_0 of Fahrenheit, reducing all to 35° of Fahrenheit, is

$$0{\cdot}000131261\,(t_0-35) + 0{\cdot}000000259\,(t_0-35)^2$$

A_1 is $\frac{1}{2}$(distance)^3 × sine deflection, corrected by the two last-mentioned quantities, for distance 1 foot; A_2 is the similar expression for distance 1·3 foot; A'_2 is $\frac{A_2}{(1\cdot3)^2}$: P is $\frac{A_1-A_2}{A_1-A'_2}$. A mean value of P is adopted from various observations; then $\frac{m}{X}=A_1\times\left(1-\frac{P}{1}\right)$ for smaller distance, or $=A_2\times\left(1-\frac{P}{1\cdot69}\right)$ for larger distance. The mean of these is usually adopted for the true value of $\frac{m}{X}$.

For computing the value of mX from observed vibrations, it is necessary to know K, the moment of inertia of the magnet as mounted. The value of log. π^2K furnished by Mr. Stewart is 1·66073 at temperature 30° and 1·66109 at temperature 90°. Then, putting T for the time of the magnet's vibration as corrected for induction, temperature, and torsion-force, the value of mX is $=\frac{\pi^2K}{T^2}$. From the combination of this value of mX with the former value of $\frac{m}{X}$, m and X are immediately found.

It appears, from a comparison of observations given in the Introduction to the *Magnetical and Meteorological Observations*, 1862, that the determinations with the Old Instrument (in use to 1861) ought to be diminished by $\frac{1}{117}$ part, to make them comparable with those of the Kew Unifilar.

The computation of the values of m and X has, to the year 1857, been made in reference to English measure only, using the foot and the grain as the units of length and weight; but, for comparison with foreign observations of the Absolute Intensity of Magnetism, it is desirable that X should be expressed also in reference to French measure, in terms of the millimètre and milligramme. If an English foot be supposed equal to α times the millimètre, and a grain be equal to β times the milligramme, then

it is seen that, for the reduction of $\frac{m}{X}$ and mX to French measure, these must be multiplied by α^3 and $\alpha^2\beta$ respectively. Hence X^2 must be multiplied by $\frac{\beta}{\alpha}$, and X by $\sqrt{\frac{\beta}{\alpha}}$. Assuming that the mètre is equal to 39·37079 inches, and the gramme equal to 15·43249 grains, log. $\sqrt{\frac{\beta}{\alpha}}$ will be found to be = 9·6637805, and the factor for reducing the English values of X to French values will be 0·46108 or $\frac{1}{2\cdot1689}$. The values of X in French measure thus derived from those in English measure are given in the proper table.

§ 4. *Standard Barometer.*

The Barometer is a standard, by Newman, mounted in 1840. It is fixed on the South wall of the West arm of the Magnetic Observatory. The graduated scale which measures the height of the mercury is made of brass, and to it is affixed a brass rod, passing down the inside of one of the upright supports, and terminating in a conical point of ivory; this point in observation is made just to touch the surface of the mercury in the cistern, and the contact is easily seen by the reflected and the actual point appearing *just* to meet each other. The rod and scale are made to slide up and down by means of a slow-motion screw. The scale is divided to $0^{in.}05$.

The vernier subdivides the scale divisions to $0^{in.}002$; it is moved by a slow-motion screw, and in observation is adjusted so that the ray of light passing under the back and front of the semi-cylindrical plate carried by the vernier, is a tangent to the highest part of the convex surface of the mercury in the tube.

The tube is $0^{in.}565$ in diameter; the correction for the effect of capillary attraction is therefore only $+ 0^{in.}002$. The cistern is of glass.

At the bottom of the instrument are three screws, turning in the fixed part of the support, and acting on the piece in which the lower pivot of the barometer-frame turns, for adjustment to verticality: this adjustment is examined weekly.

The readings of this barometer are considered to be coincident with those of the Royal Society's flint-glass standard barometer.

All observations of this barometer have been corrected for the difference of temperature of the mercury in the tube at the time of observation from 32°, by the application of the corrections contained in the table for barometers whose scales are engraved upon a rod of brass reaching from the level of the mercury to the vernier. (See the report of the Committee of Physics and Meteorology approved by the Royal Society.)

The height of the cistern above the mean level of the sea is 159 feet. This element is founded upon the determination of Mr. Lloyd, in the *Phil. Trans.*, 1831; the elevation of the cistern above the brass piece inserted in a stone in the transit-room (to which Mr. Lloyd refers) being $5^{ft.}2^{in.}$.

The barometer has been read at 21^h, 0^h, 3^h, 9^h (astronomical), on every day, excepting on Sundays, and on Good Friday and Christmas Day, on which days fewer observations have been taken. Every reading has been reduced to the reading which would have been obtained at the temperature 32° of the mercury and scale, by application of the correction given in Table II. (pages 82 to 87) of the Report of the Committee of Physics of the Royal Society. The mean of the reduced readings has then been taken for each civil day, and finally converted into mean daily reading, by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, Part I.

In the printed record of the barometrical and all other meteorological observations, the day is to be understood, generally, as defined in civil reckoning.

§ 5. *Photographic self-registering Apparatus for continuous Record of the readings of the Barometer.*

The Photographic self-registering Apparatus for continuous Record of Magnetic Vertical Force is furnished with a vertical cylinder covered with photographic paper and revolving in 24 hours. North of the surface of this cylinder, at the distance of about 30 inches, is a large syphon barometer, the bore of the upper and lower extremities of its arms being about 1·1 inch. A glass float in the quicksilver of the lower extremity is partially supported by a counterpoise acting on a light lever (which turns on delicate pivots), so that the wire supporting the float is constantly stretched, leaving a definite part of the weight of the float to be supported by the quicksilver. This lever is lengthened to carry a vertical plate of opaque mica with a small aperture, whose distance from the fulcrum is eight times the distance of the point of attachment of the float wire, and whose movement, therefore, is four times the movement of the column of a cistern-barometer. Through this hole the light of a lamp, collected by a cylindrical lens, shines upon the photographic paper.

The scale of time is established by means of occasional interruptions of the light, and the scale of measure is established by comparison with occasional eye-observations.

This barometer was brought into use in 1848, but its indications were not satisfactory till the mercury was boiled in the tube by Messrs. Negretti and Zambra on 1853, August 18, since which time they have appeared unexceptionable. Results of the indications are printed in the *Maxima and Minima of the Barometer*, near the end of the Meteorological Results.

§ 6. *Thermometers for ordinary Observation of the Temperature of the Air and Evaporation.*

The Dry-Bulb Thermometer, the Wet-Bulb Thermometer, the Maximum Self-Registering Thermometers, both dry and wet, and the Minimum Self-Registering Thermometers, dry and wet, all for determination of the temperature of the air and

of evaporation, are mounted on a revolving frame whose fixed vertical axis is planted in the ground. From the year 1846 to 1863 the post forming the vertical axis was about 23 feet south (magnetic) of the S.S.E. angle of the south arm of the Magnetic Observatory; in 1863 it was moved to a position about 35 feet south (astronomical) of the south angle. A frame revolves on this post, consisting of a horizontal board as base, of a vertical board projecting upwards from it connected with one edge of the horizontal board, and of two parallel inclined boards (separated about three inches) connected at the top with the vertical board, and at the bottom with the other edge of the horizontal board. The outer inclined board is covered with zinc. The air passes freely between all these boards.

The dry and wet-bulb thermometers are attached to the outside, and near the center of the vertical board; the maximum and minimum thermometers for air towards one vertical edge, and those for evaporation towards the other vertical edge, with their bulbs at almost the same level, and near to those of the dry and wet-bulb thermometers; their bulbs are about 4 feet above the ground and projecting from 2 inches to 3 inches below the horizontal board. Above the thermometers is a small projecting roof to protect them from rain. The frame is always turned with the inclined side towards the sun. It is presumed that the thermometers are thus sufficiently protected.

The graduations of all the thermometers used in the Royal Observatory rest fundamentally upon those of a Standard Thermometer, the property of Mr. Glaisher, which derives its authority from comparison with original thermometers constructed by the late Rev. R. Sheepshanks about the years 1840–1843, in the course of his preparations for the construction of the National Standard of Length. The whole of the radical determinations of Freezing Point, Boiling Point, and Subdivision of Volume of Tube, were made by Mr. Sheepshanks with the utmost care: it is believed that these were the first original thermometers that had been constructed in England for many years. Mr. Glaisher's thermometer has been used as the standard of reference for all the thermometers used in the Royal Observatory since 1840.

The Dry-Bulb Thermometer is by Newman. The corrections required for its readings, as found by comparison with the standard above-mentioned, are as follows:—

Below	32°	subtract	0°·5
Between	32 and 43°		0·6
	44 and 47		0·7
	48 and 56		0·9
	57 and 61		1·1
	62 and 74		1·3
	75 and 80		1·5
	81 and 86		1·8
	87 and 95		2·0
	96 and 100		2·2

The Wet-Bulb Thermometer is by Negretti and Zambra. Its bulb is of the same size as that of the Dry-Bulb Thermometer. A piece of muslin is wrapped round the bulb, and a skein of cotton is led from it into a cup of rain-water, by which it is maintained in a state of moisture. In frosty weather the muslin is moistened some time before each observation. The corrections which the readings of this thermometer are found to require are as follows:

Below	32°	subtract 0°·4
Between	32° and 36°	0°·3
	37 and 40	0°·2
	41 and 55	0°·1
	56 and 75	0°·0
Above	75	add 0°·1

The eye-readings of the dry-bulb and wet-bulb thermometers have usually been taken at the hours (astronomical reckoning) 21^h, 0^h, 3^h, 9^h, and corrected by application of the numbers given above; then their mean has been taken, and a correction applied, in order to obtain the true diurnal mean. This correction is derived from the numbers in Mr. Glaisher's paper in the *Philosophical Transactions* for 1848.

The dew-point has been inferred exclusively from the simultaneous observations of the dry-bulb and wet-bulb thermometers, by multiplying the difference between the readings of these thermometers by a factor peculiar to the temperature of the air, and subtracting the product from the reading of the dry-bulb thermometer. These factors have been found by Mr. Glaisher from the comparison of a great number of dew-point determinations, obtained by use of Daniell's hygrometer, with simultaneous observations of dry-bulb and wet-bulb thermometers. The first part of this investigation was published in full, in the volume of *Magnetical and Meteorological Observations* for 1844, pages 67–72; it was based upon all the observations made up to that time. Subsequently, the comparison was extended to include all the simultaneous observations of these instruments made at the Royal Observatory, Greenwich, from 1841 to 1854, with some observations taken at high temperatures in India, and others at low and medium temperatures at Toronto. The results at the same temperature were found to be the same at these different localities, so far as the climatic circumstances permitted comparison. (See Glaisher's Hygrometrical Tables, 3rd Edition). The following table exhibits the result of the entire comparison; it has been used in forming the dew-points in the present volume.

TABLE OF FACTORS by which the DIFFERENCE of READINGS of the DRY-BULB and WET-BULB THERMOMETERS is to be MULTIPLIED in order to PRODUCE the DIFFERENCE between the READINGS of the DRY-BULB and DEW-POINT THERMOMETERS.

Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.
°		°		°		°	
10	8·78	33	3·01	56	1·94	79	1·69
11	8·78	34	2·77	57	1·92	80	1·68
12	8·78	35	2·60	58	1·90	81	1·68
13	8·77	36	2·50	59	1·89	82	1·67
14	8·76	37	2·42	60	1·88	83	1·67
15	8·75	38	2·36	61	1·87	84	1·66
16	8·70	39	2·32	62	1·86	85	1·65
17	8·62	40	2·29	63	1·85	86	1·65
18	8·50	41	2·26	64	1·83	87	1·64
19	8·34	42	2·23	65	1·82	88	1·64
20	8·14	43	2·20	66	1·81	89	1·63
21	7·88	44	2·18	67	1·80	90	1·63
22	7·60	45	2·16	68	1·79	91	1·62
23	7·28	46	2·14	69	1·78	92	1·62
24	6·92	47	2·12	70	1·77	93	1·61
25	6·53	48	2·10	71	1·76	94	1·60
26	6·08	49	2·08	72	1·75	95	1·60
27	5·61	50	2·06	73	1·74	96	1·59
28	5·12	51	2·04	74	1·73	97	1·59
29	4·63	52	2·02	75	1·72	98	1·58
30	4·15	53	2·00	76	1·71	99	1·58
31	3·70	54	1·98	77	1·70	100	1·57
32	3·32	55	1·96	78	1·69		

The maximum self-registering thermometer is a mercurial thermometer, of the construction invented by Messrs. Negretti and Zambra. There is a small detached piece of glass in the tube, just above a bent part of the tube (near the bulb), through which the piece of glass cannot pass down. The column of mercury in rising lifts the glass up and passes freely; but in descending it is unable to pass the glass, and the lower mass of mercury descends, leaving a vacant space below the glass, and leaving a portion of the mercury above it. The piece of glass operates as an efficient valve. The graduation of this thermometer is sensibly correct. There is a similar thermometer for the maximum wet-bulb reading; its readings are too high by 0°·4.

The minimum self-registering thermometer is an alcohol thermometer, of the construction known as Rutherford's. A sliding glass index allows the alcohol in rising to pass above it, but is drawn down by the peculiar action of the bounding surface of the fluid when it sinks. The readings of that which gives the minimum temperature of the air require an additive correction 0°·5; those of the minimum wet-bulb temperature require corrections varying from +2°·2 at 24° to −0°·2 at 71°.

The numbers in the printed columns of Mean Daily Value of Dry Thermometer are found by combining two numbers derived from different sources. One is the corrected mean of four observations taken in the day, as is described above. The

other is the mean of the maximum and minimum corrected by a small quantity depending on the month, given in Mr. Glaisher's paper. The adopted mean temperature is the mean of those two numbers, weights being given proportional to the number of observations from which they are derived.

For the Mean Daily value of Dew Point, the dew-point is found from the observations at 21^h, 0^h, 3^h, 9^h, in the manner above described, and by use of the table of factors given above, and the mean of these dew-points is corrected by a number given in the paper in the *Philosophical Transactions*, 1848.

§ 7. *Photographic self-registering Apparatus for continuous Record of the Readings of the Dry-Bulb and Wet-Bulb Thermometers.*

About 28 feet south (magnetic) of the south-east angle of the south arm of the Magnetic Observatory, and about 25 feet east of the thermometers for eye-observations, is a shed 10 feet square, standing upon posts 9 feet high, under which are placed the photographic thermometers, the dry-bulb thermometer towards the east, and the wet-bulb thermometer towards the west. The bulbs of the thermometers are eight inches in length, and 0·4 inch internal bore, and their centers are about 4 feet above the ground. The bulb of one of the thermometers is covered with muslin throughout its whole length, which is kept moist by means of capillary passage of water along cotton wicks leading to a vessel filled with water.

There are small adjustments admitting the raising or dropping of the thermometers, so that the register of their changing readings may be on a convenient part of the paper. The thermometer frames are covered by plates having longitudinal apertures, so narrow, that any light which may pass through them is completely, or almost completely, intercepted by the broad flat column of mercury in the thermometer-tube. Across these plates a fine wire is placed at every degree; and at the decades of the degrees, and also at 32°, 52°, and 72°, a coarser wire is placed. A gas lamp is placed about 9 inches from each thermometer (east of the dry bulb and west of the wet bulb), and its light, condensed by a cylindrical lens, whose axis is vertical, shines through the thermometer-tube above the surface of the mercury, and forms a well-defined line of light upon the photographic paper, which is wrapped around the cylinder. As the cylinder revolves under this light, it receives a broad sheet of photographic trace, whose breadth (in the direction of the axis of the cylinder) varies with the varying height of the mercury in the thermometer-tube. The light in its passage is intercepted by the wires placed across the tube at every degree, and there are, therefore, left upon the paper corresponding lines in which there is no photogenic action.

The cylinder revolves in 48 hours; the daily photographic traces of the two thermometers are thus simultaneously registered on opposite sides of the cylinder without intermixing. The length of the cylinder is $13\frac{1}{2}$ inches, and its circumference is 19 inches.

§ 8. *Thermometers for Solar Radiation and Radiation to the Sky.*

The thermometer for Solar Radiation is placed in an open box about 10 feet south of the south-west angle of the south arm of the Magnetic Observatory. The box is about 13 inches high; the bulb of the thermometer is about 10 inches above the bottom of the box, fully exposed to the sun's rays.

The thermometer is a self-registering maximum mercurial thermometer of Negretti and Zambra's construction; its bulb is blackened, and enclosed in a glass sphere from which the air has been exhausted. Its graduations are correct, and the numbers inserted in the tables are those read from the instrument without alteration. The thermometer is read at 9^h a.m., noon, 3^h p.m., and occasionally at 9^h p.m.; the highest of these readings is adopted as the maximum for the day.

Near to this thermometer, within the same box, and at the same height, is placed a thermometer with blackened bulb, which is not enclosed in an exhausted sphere. An instrument of this form and in this position was exclusively used to the year 1859. Simultaneous readings of both instruments are now taken, with the view of rendering the series of observations which terminated in 1859 (made with exposed bulb) comparable with that which commenced in 1859, and is still continued (made with bulb inclosed in an exhausted sphere).

The thermometer for radiation to the sky is placed about 12 feet west of the Solar Radiation thermometer, with its bulb resting on short grass, and fully exposed to the sky. It is a self-registering minimum spirit thermometer of Rutherford's construction, made by Negretti and Zambra. Its graduation is correct, and the numbers inserted in the table are those read from the scale without alteration. It is read every day at 9^h a.m., and occasionally at 9^h p.m.

This thermometer was out of order on April 19, 26, May 4, July 9, August 1, 7, 9, 10, 11, 14, 30, September 5, October 19, and November 3.

§ 9. *Thermometers sunk below the Surface of the Soil at different Depths.*

These thermometers were made by Messrs. Adie of Edinburgh, under the immediate superintendence of Professor (now Principal) J. D. Forbes. The graduation was made by Professor Forbes himself.

The thermometers are four in number. They are all placed in one hole in the ground, the diameter of which in its upper half is 1 foot, and in its lower half about 6 inches. Each thermometer is attached in its whole length to a slender piece of wood, which is planted in the hole with it. The place of the hole is 20 feet south of the extremity of the south arm of the Magnetic Observatory, and opposite the center of its south front.

The soil consisted of beds of sand; of flint-gravel with a large proportion of sand; and of flints with a small proportion of sand, cemented almost to the consistency of pudding-stone. Every part of the gravel and sand extracted from the hole was perfectly dry.

The bulbs of the thermometers are cylindrical, 10 or 12 inches long and 2 or 3 inches in diameter. The bore of the principal part of the tubes, from the bulb to the graduated scale, is very small. In that part to which the scale is attached, the tube is larger.

The thermometer No. 1 was dropped into the hole to such a depth that the center of its bulb was 24 French feet (25·6 English feet) below the surface: then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the center of its bulb was 12 French feet below the surface; No. 3 and No. 4 till the centers of their bulbs were respectively 6 and 3 French feet below the surface; and the hole was then completely filled with dry sand. The upper parts of the tubes, carrying the scales, were left projecting above the surface: No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, the parts 8·5, 10·0, 11·0, and 14·5 inches, respectively are tube with narrow bore.

The projecting parts of the tubes are protected by a wooden case or box fixed to the ground; the sides of the box are perforated with numerous holes, and it has a double roof. In the North face of this box is a large plate of glass through which the thermometers are read. Within the box are two smaller thermometers one (No. 5) whose bulb is sunk one inch in the ground, and one (No. 6) whose bulb is in the free air nearly in the center of the box.

The fluid of the four long thermometers is alcohol tinged with a red colour.

The values of 1° on the scales of Nos. 1, 2, 3 and 4, are respectively $2^{in.}$, $1^{in.}1$, $0^{in.}9$, and $0^{in.}55$; and the ranges of the scales, as first mounted, were, 43°·0 to 57°·7, 42°·0 to 56°·8, 39°·0 to 57°·5, and 34°·2 to 64°·5.

These ranges for Nos. 2, 3, and 4, were found to be insufficient in some years, particularly those of Nos. 3 and 4, or the thermometers sunk to the depth of 6 feet and 3 feet.

In 1857, June 22, Messrs. Negretti and Zambra removed from Nos. 3 and 4 a quantity of fluid corresponding to the extent of 5° on their scales, and the scales of these two thermometers were lowered by that linear extent, making the readings the same as before.

In subsequent years it was found that the amount of fluid removed was somewhat too great, for now at the lower end of the scale the 6-foot thermometer sometimes falls below the limit of its scale or $43\frac{1}{2}°$; and the 3-foot thermometer below 39°·7; in which cases the alcohol sinks into the capillary tube.

The readings at the early part of the series were at times defective at high tempera-

tures, but always complete at low temperatures; now, they are always complete at high temperatures, and are at times defective at low temperatures. The two combined however, will enable us to complete all readings.

These thermometers are read once a day, at noon, and the readings appear in the printed volumes as read from their scales without correction.

§ 10. *Thermometers immersed in the Water of the Thames.*

The self-registering maximum and minimum thermometers for determining the highest and lowest temperatures of the water of the Thames are by Messrs. Negretti and Zambra, and are observed every day at 9^h a. m.

A strong wooden trunk is firmly fixed to the side of the Dreadnought Hospital Ship, about 5 feet in length, and closed at the bottom; the bottom and the sides, to the height of 3 feet, are perforated with a great number of holes, so that the water can easily flow through; the thermometers are suspended within this trunk so as to be about 2 feet below the surface of the water, and 1 foot from the bottom of the trunk.

The regular observations are made under the superintendence of the Medical Officers of the Ship.

The thermometer for maximum temperature was out of order on February 13 to 23, April 17 to 20, June 30, July 1 to 23, November 1 to 14, 25, 28, 29, 30, December 2, 8, 9. That for minimum temperature was out of order on February 13, 21, 22, 23, April 17 to 21, November 1 to 14, 25, 28, 29, 30, December 2, 8, 9.

§ 11. *Osler's Anemometer.*

This anemometer is self-registering: it was made by Newman, but has received several changes since it was originally constructed. A large vane, which is turned by the wind, and from which a vertical spindle proceeds down nearly to the table in the north-western turret of the ancient part of the Observatory, gives motion by a pinion upon the spindle to a rackwork carrying a pencil. This pencil makes a mark upon a paper affixed to a board which is moved uniformly in a direction transverse to the direction of the rack-motion. The movement of the board is effected by means of a rack connected with the pinion of a clock. The paper has lines printed upon it corresponding to the positions which the pencil must take when the direction of the vane is N., E., S., or W.; and also has transversal lines corresponding to the positions of the pencil at every hour. The first adjustment for azimuth was obtained by observing from a certain point the time of passage of a star behind the vane-shaft, and computing from that observation the azimuth; then on a calm day drawing the vane by a cord to that position, and adjusting the rack, &c., so that the pencil position on the sheet corresponded to that azimuth.

For measuring the pressure of the wind, the shaft of the vane carries a plate one foot square, which is supported by horizontal rods sliding into grooves, and is urged in opposition to the wind by three springs, so arranged that only one comes into play when the wind is light, and the others necessarily act in conjunction with the first as the plate is driven further and further by the force of the wind. A cord from this plate passes over a pulley, and communicates with a copper wire passing through the center of the spindle, which at the bottom communicates with another cord passing under a pulley and held in tension by a slight spring: and by this a pencil is moved transversely to the direction in which the paper fixed to the board is carried by the clock. Lines are printed upon the paper corresponding to different values of the pressure; the intervals of these lines were adjusted by applying weights of 1 lb., 2 lbs., &c., to move the pressure-plate in the same manner as if the wind pressed it.

A fresh sheet of paper is applied to this instrument every day at 22^h mean solar time.

§ 12. *Robinson's Anemometer.*

This anemometer is self-registering, and was made by Messrs. Negretti and Zambra on the principles described by Dr. Robinson in the Transactions of the Royal Irish Academy, vol xxii. It is furnished with four hemispherical cups [each being 3·75 inches in diameter], attached to the extremities of two arms at right angles to each other, and revolving in a horizontal plane by the excess of pressure of the wind on their concave over that on their convex surfaces.

The distance between the centers of opposite cups is 13·45 inches, and their centers describe 42·24 inches in each revolution, indicating, according to the theory, a horizontal movement of the air of 126·72 inches for each revolution, and of one mile for 500 revolutions. The accuracy of this theory was verified by experiments made in 1860 (to be described immediately). The horizontal arms are connected with a vertical spindle, upon which is an endless screw, working in a toothed wheel connected with a train of wheels, furnished with indices capable of registering one mile and decimal multiples of a mile up to 1,000 miles. The instrument is read every day at 22^h.

In the year 1860, on July 3, 4, and 13, experiments were made in Greenwich Park to ascertain the correctness of the theory of Robinson's anemometer; the point to be verified being that the scale of the instrument, founded on the supposition that the horizontal motion of the air is about three times the space described by the centers of the cups, is correct.

A post about 5 feet high with a vertical spindle in the top was erected, and on this spindle turned a horizontal arm, carrying at the extremity of its longer portion Robinson's anemometer, and on its shorter portion a counterpoise. The distance from the vertical spindle of the post to the vertical axis of the anemometer was $17^{ft.}\ 8^{in.}\cdot7$.

The reading of the dial was taken, and then the arm was made to revolve in the horizontal plane 50 or 100 times, an attendant counting the number of revolutions, and the reading of the dial was again taken. In this manner 1,000 revolutions were made in the direction N.E.S.W.N., and 1,000 revolutions in the direction N.W.S.E.N. In some of the experiments the air was sensibly quiet, and in others there was a little wind; the result was,

For a movement of the instrument through one mile,

Beam revolving N.E.S.W. (opposite to the direction of rotation of the Anemometer-cups)	1·15 was registered
Beam revolving N.W.S.E. (in the same direction as the Anemometer-cups)	0·97 was registered.

The results from rapid revolutions and from slow revolutions were sensibly the same.

This may be considered as confirming in a very high degree the accuracy of the theory.

§ 13. *Rain Gauges.*

The rain-gauge connected with Osler's anemometer is 50 feet 8 inches above the ground, and 205 feet 6 inches above the mean level of the sea. It exposes to the rain an area of 200 square inches (its horizontal dimensions being 10 by 20 inches).

The collected water passes through a tube into a vessel suspended in a frame by spiral springs, which lengthen as the water increases, until 0·24 of an inch is collected in the receiver; it then discharges itself by means of the following modification of the syphon. A copper tube, open at both ends, is fixed in the receiver, in a vertical position, with its end projecting below the bottom. Over the top of this tube a larger tube, closed at the top, is placed loosely. The smaller tube thus forms the longer leg, and the larger tube the shorter leg of a syphon. The water, having risen to the top of the smaller tube, gradually falls through it into the uppermost portion of a tumbling bucket, fixed in a globe under the receiver. When full, the bucket falls over, throwing the water into a small pipe at the lower part of the globe; the water completely fills the bore of the pipe; its descent causes an imperfect vacuum in the globe, sufficient to cause a draught in the longer leg of the syphon, and the whole contents run off. After leaving the globe, the water is received in a pipe attached to the building, which carries it away. The springs then shorten and raise the receiver. The ascent and descent of the water-vessel move a radius-bar which carries a pencil; and this pencil makes a trace upon the paper carried by the sliding-board of the self-registering anemometer.

The scale of the printed paper was adjusted by repeatedly filling the water-vessel until it emptied itself, then weighing the water, and thus ascertaining its bulk, and dividing this bulk by the area of the surface of the rain receiver.

A second gauge, with an area 77 square inches nearly, is placed close to the preceding, the receiving surface of both being on the same horizontal plane.

A third gauge is placed on the roof of the Octagon room, at 38 feet $4\frac{1}{2}$ inches above the ground, and 193 feet $2\frac{1}{2}$ inches above the mean level of the sea. It is a simple cylinder gauge, 8 inches in diameter and about $50\frac{1}{4}$ inches in area. The height of the cylinder is $13\frac{1}{2}$ inches; at the depth of 1 inch from the top within the cylinder is fixed a funnel (an inverted cone) of 6 inches perpendicular height; with the point of this funnel is connected a tube, $\frac{1}{5}$ of an inch in diameter, and $1\frac{1}{2}$ inch in length; $\frac{3}{4}$ of an inch of this tube is slightly curved, and the remaining $\frac{3}{4}$ of an inch is bent upwards, terminating in an aperture of $\frac{1}{8}$ of an inch. By this arrangement, the last few drops of water remain in the bent part of the tube, and the water is some days evaporating. The upper part of the funnel or bore of the cone is connected with a brass ring, which has been turned in a lathe, and this is connected with a circular piece 6 inches in depth, which passes outside the cylinder, and rests in a water joint, attached to the inner cylinder, and extending all round.

A fourth gauge is placed on the top of the Library; it is a funnel, whose diameter is 6 inches; its exposed area is $28\frac{1}{4}$ inches nearly. The water passes into a cylinder, from which it is poured into a circular vessel, the diameter of which is $3\frac{1}{4}$ inches; and therefore 3·4 inches of this corresponds to 1 inch of rain. The receiving surface of the gauge is 22 feet 4 inches above the ground, and 177 feet 2 inches above the mean level of the sea.

A fifth gauge is planted on the roof of the Photographic Thermometer stand, 10 feet above the ground, and 164 feet 10 inches above the mean level of the sea. Its construction is the same as that of the third gauge.

A sixth gauge is a self-registering rain-gauge on Crosley's construction, made by Watkins and Hill. The surface exposed to the rain is 100 square inches. The collected water falls into a vibrating bucket, whose receiving concavity is entirely above the center of motion, and which is divided into two equal parts by a partition whose plane passes through the axis of motion. The pipe from the rain-receiver terminates immediately above the axis. Thus that part of the concavity which is highest is always in the position for receiving water from the pipe. When a certain quantity of water has fallen into it, it preponderates, and, falling, discharges its water into a cistern below; then the other part of the concavity receives the rain, and after a time preponderates. Thus the bucket is kept in a state of vibration. To its axis is attached an anchor with pallets, which acts upon a toothed wheel by a process exactly the reverse of that of a clock-escapement. This wheel communicates motion to a train of wheels, each of which carries a hand upon a dial-plate; and thus inches, tenths, and hundredths are registered. Sometimes, when the escapement has obviously failed, the water which has descended to the lower cistern has again been passed through the gauge, in order to enable an assistant to observe the indication of the dial-plates without fear of an imperfection in the machinery escaping notice. The gauge is placed

on the ground, 21 feet South of the Magnetic Observatory, and 156 feet 6 inches above the mean level of the sea.

The seventh and eighth gauges are placed near together, about 16 feet south of the Magnetic Observatory, 5 inches above the ground, and 155 feet 3 inches above the mean level of the sea. They are similar in construction and area to No. 3. These cylinders are sunk about 8 inches in the ground.

All these gauges, except No. 7, are read at 22^h daily; in addition, Crosley's gauge and No. 8 are read daily at 9^h p.m., and No. 7 at the end of each month only, to check the summation of the daily readings of No. 8.

Gauges Nos. 1, 2, 3, 5, 8 were made by Messrs. Negretti and Zambra; No. 4 by Troughton; No. 6 by Watkins and Hill; and No. 7 is an old gauge.

§ 14. *The Actinometer.*

The actinometer consists of a hollow cylinder of glass 7 inches in length, and 1·22 inch in diameter, united at one end to a tube similar to a thermometer tube, 7 inches in length, which is terminated at its upper end by a ball 1·1 inch in diameter, the upper part of which is drawn out to a point, and broken off, so as to leave the end open, merely stopped by wax, and covered by a brass cap. The other end of the cylinder is closed by a silver plated cap, cemented on it, and furnished with a screw of silver, with 16 threads to an inch, passing through a collar of waxed leather. The axis of this screw is perforated through its entire length, to allow the stem of a thermometer to pass through it, (the bulb of which is nearly central within the cylinder), for the purpose of determining the temperature of the inclosed liquid. This liquid is of a deep blue colour (ammonio-sulphate of copper). When the actinometer is used in observation, the ball at the top is left full of air, and, according to the position of the screw, the liquid mounts into the first-mentioned tube, and its elevation can be read off on an attached scale which is divided into 100 parts. The cylinder is enclosed in a chamber which is blackened on three sides, and is covered on the fourth side or front by plate glass, to defend the chamber from currents of air; this glass is removeable at pleasure. The screw is used to diminish or increase the capacity of the cylindrical cistern, and thus to drive into the ball, which acts as a reservoir, all air out of the tube, and then to draw back from the reservoir such a quantity as shall leave the top of the liquid at the zero of the scale or elsewhere at pleasure, leaving no bubble of air in the cylinder, and no blebs of liquid in the tube.

For using the instrument a wooden table is prepared, with a moveable part, on which the instrument is placed, and on which it can very readily be exposed perpendicularly to the rays of the Sun; and where a screen can momentarily be placed so as to cut off all the rays of the Sun from the chamber of the instrument, and can be quickly withdrawn, so as fully to expose the cylindrical chamber to the Sun's radiation.

The method of observation is as follows:

The liquid being adjusted to zero of the scale by the screw, will mount into the stem, as soon as exposed to the Sun. It is allowed to do so for a minute or two, taking care, by the use of the screw, that it does not mount into the ball. When all is ready for observation, the liquid is drawn down to the zero of the scale, slowly and steadily, the thermometer is read for the temperature of the liquid, at the beginning of a minute the scale is read, and at the end of a minute it is read again: the screen is placed before the instrument: at the following 30^s the scale is read for the first shade-observation, and at one minute afterwards is again read for the second shade-observation; the instrument is then exposed to the Sun at the beginning of the next minute, and read as before: and so on successively.

A delicate blackened bulb thermometer for solar radiation has also been frequently read during each series of experiments, for collection of comparative observation of the two instruments.

It is found by experiment that the fluid is driven up the tube 100 divisions by one-tenth of a turn of the screw. One inch in length of the screw including 16 threads, the distance between two contiguous threads is therefore 0·0625 inch.

A fine piece of silk was carefully passed round the bottom of 18 threads; its length was found to be 25·2 inches. Therefore the circumference of the screw at the bottom of the thread was 1·4 inch and its diameter 0·445 nearly. The depth of the thread is fully 0·05 inch.

These measures will give the means of converting the observed readings of the liquid in the slender tube into actual expressions of the proportion to the general store of liquid in the cylindrical chamber.

§ 15. *Electrical Apparatus.*

The electrical apparatus consists of two parts, namely, the Moveable Apparatus, which is connected with a pole nearly 80 feet high planted 7 feet North and 2 feet East of the north-east angle of the north arm of the Magnetic Observatory (as extended in 1862); and the Fixed Apparatus, which is mounted in a projecting window in the ante-room of the Magnetic Observatory.

On the top of the pole is fixed a projecting cap, to which are fastened the ends of two iron rods, which terminate in a pit sunk in the ground, and are kept in tension by attached weights. These rods are to guide the moveable apparatus in its ascents and descents. Near the bottom of the pole is fixed a windlass; the rope upon which it acts passes over a pulley in the cap, and is used to raise the moveable apparatus, which when raised to the top is suspended on a hook.

The moveable apparatus consists of the following parts:—A plank in a nearly vertical position is attached to perforated iron bars, which slide upon the iron rods.

On the upper part of this plank is a cubical box. The box incloses a stout pillar of glass, having a conical hollow in its lower part. In the bottom of the box there is a large hole through which a cone of copper passes into the conical hollow of the glass pillar. In a space below the box a gas-lamp is placed, by the flame of which the copper cone and the lower part of the glass pillar are kept in a state of warmth. A copper wire is fastened round the glass pillar; its end is carried to a similar glass pillar, warmed in the same manner, near the north-western turret of the Octagon room; by this wire, whose length is about 400 feet, the atmospheric electricity is collected. To this wire, near the box, is attached another copper wire 0·1 inch in diameter, and about 73 feet long, at the end of which is a hook; a loaded brass lever connected with the fixed apparatus presses upon this hook, and thus keeps the wire in a state of tension, and at the same time establishes the electrical communication between the long horizontal wire and the fixed apparatus.

The fixed apparatus consists of these parts:—A glass bar, nearly 3 feet long, and thickest at its middle, is supported in a horizontal position, its ends being fixed in pieces of wood projecting downwards from the roof of the projecting window. Near to each end is placed a small gas-lamp, whose chimney encircles the glass, and whose heat keeps the glass in a state of warmth proper for insulation. A brass collar surrounds the center of the glass bar; it carries one brass rod, projecting vertically upwards through a hole in the roof of the window-recess, to which rod are attached a small umbrella and the loaded lever above-mentioned; and it carries another rod projecting vertically downwards, to which is attached a horizontal brass tube in an East and West direction. On the North and South sides of this tube there project four horizontal rods, through the ends of which there pass vertical rods, which can be fixed by screws at any elevation; these are placed in connexion with the electrometers, which rest on the window seat.

The electrometers during the year 1864 consisted of a Double Gold Leaf Electrometer of the ordinary construction; two Volta's Electrometers, denoted by Nos. 1 and 2; a Henley's Electrometer; a Ronalds' Spark Measurer; a Dry-pile Apparatus; and a Galvanometer.

Volta 1 and Volta 2 are of the same construction; each is furnished with a pair of straws 2 Paris inches in length; those of the latter being much heavier than those of the former: each instrument is furnished with a graduated ivory scale, whose radius is 2 Paris inches, and it is graduated into half Paris lines. In the original construction of these instruments it was intended that each division of No. 2 should correspond to five of No. 1: the actual relation between them has not yet been determined by observations at the Royal Observatory. The straws are suspended by hooks of fine copper wire to the suspension-piece, and they are separated by an interval of half a line.

Henley's Electrometer is supported on the West end of the large horizontal tube by means of a vertical rod fixed in it. On each side of the upper part of this rod is

affixed a semicircular plate of ivory, whose circumference is graduated; at the centers of these ivory plates two pieces of brass are fixed, which are drilled to receive fine steel pivots, carrying a brass axis, into which the index or pendulum is inserted; the pendulum terminates with a pith ball. The relation between the graduations of this instrument and those of the other electrometers has not been determined. This instrument has seldom been affected till Volta 2 has risen to above 100 divisions of its scale.

The spark measurer consists of a vertical sliding rod terminated by a brass ball, which ball can be brought into contact with one of the vertical rods before referred to, also terminating in a ball; and it can be moved from it or towards it by means of a lever, with a wooden handle. During the operation of separating the balls, an index runs along a graduated scale, and exhibits the distance between the balls, and this distance measures the length of the spark.

The electrometers and the spark measurer were originally constructed under the superintendence of Francis Ronalds, Esq., but have since received small alterations.

The dry-pile apparatus was made by Watkins and Hill; it is placed in connexion with the brass bar by a system of wires and brass rods. The indicator, which vibrates between the two poles, is a small piece of gold leaf. This instrument is very delicate, and it indicates at once the quality of the electricity. When the inclination of the gold leaf is such that it is directed towards the top of either pile, it remains there as long as the quantity of electricity continues the same or becomes greater: the position is sometimes expressed in the notes by the words "as far as possible." The angle which the gold leaf makes with the vertical at this time is about 40°.

The galvanometer was made by Gourjon of Paris, and consists of an astatic needle, composed of two large sewing needles, suspended by a split silk fibre, one of the needles of the pair vibrating within a ring formed by 2,400 coils of fine copper wire. The connexions of the two portions of wire forming these 2,400 coils are so arranged that it is possible to use a single system of 1,200 coils of single wire, or a system of 1,200 coils of double wire, or a system of 2,400 coils of single wire: in practice the last has always been used. A small ball communicating by a wire with one end of the coils is placed in contact at pleasure with the electric conductor, and a wire leading from the other end of the coil communicates with the earth. An adjustible circular card, graduated to degrees, is placed immediately below the upper needle; the numeration of its divisions proceeds in both directions from a zero. One of these directions is distinguished by the letter A, and the other by the letter B; and the nature of the indication represented by the deflection of the needle towards A or towards B will be ascertained from the following experiment. A voltaic battery being formed by means of a silver coin and a copper coin, having a piece of blotting paper moistened with saliva between them: when the copper touches the small ball, and the wire which usually communicates with the earth is made to touch the silver, the needle turns

towards A; when the silver touches the small ball, and the wire is made to touch the copper, the needle turns towards B.

§ 16. *Explanation of the Tables of Meteorological Observations.*

The mean daily value of the difference between dew-point temperature and air-temperature is the difference between the two numbers in the sixth and seventh columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, or they are found from the absolute maxima and minima, as determined by comparing the observations of the self-registering wet-bulb thermometers with those of the self-registering dry-bulb thermometers.

The difference between the mean temperature for the day and the mean for the same day of the year on an average of forty-three years, is found by comparison with a table of results deduced by Mr. Glaisher from forty-three years' observations, made at the Royal Observatory, ending 1856.

Little explanation of the results deduced from Osler's Anemometer appears to be necessary. It may be understood generally that the greatest pressure occurred in gusts of short duration.

Robinson's Anemometer is read off every day at 22^h (10^h A.M.).

The register of rain is read at 9^h P.M. from the Cylinder Rain-gauge partly sunk in the ground, described above as the "eighth." If, however, there appears to be any doubt as to the correctness of the results, reference is made to a Rain-gauge of similar construction and placed near to it, called above the "seventh."

For understanding the divisions of time under the heads of Electricity and Weather, the following remarks are necessary:—The day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is roughly subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the remarks before it apply (roughly) to the interval from midnight to 6 A.M., and those following it to the interval from 6 A.M. to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column.

The following is the explanation of the notation employed for record of electrical observations, it being premised that the quality of the Electricity is always to be supposed positive when no indication of quality is given:—

g cur.	denotes *galvanic currents*	s	denotes *strong*
m	... *moderate*	sp	... *sparks*
N	... *negative*	v	... *variable*
P	... *positive*	w	... *weak*

The duplication of the letter denotes an intensity of the modification described: thus, s s is very strong; v v, very variable.

The Clouds and Weather are described generally by Howard's Nomenclature; the figure denotes the proportion of sky covered by clouds, the whole sky being represented by 10. The notation is as follows:

a denotes *aurora borealis*
ci ... *cirrus*
ci-cu ... *cirro-cumulus*
ci-s ... *cirro-stratus*
cu ... *cumulus*
cu-s ... *cumulo-stratus*
d ... *dew*
h-d ... *heavy dew*
f ... *fog*
sl-f ... *slight fog*
th-f ... *thick fog*
fr ... *frost*
glm ... *gloom*
gt-glm.. *great gloom*
h-fr ... *hoar frost*
h ... *haze*
hl ... *hail*
so-ha ... *solar halo*
l ... *lightning*
li-cl ... *light clouds*
lu-co ... *lunar corona*
lu-ha ... *lunar halo*
m ... *meteor*
ms ... *meteors*
n ... *nimbus*
r ... *rain*
th-r ... *thin rain*
oc-r ... *occasional rain*
fr-r ... *frozen rain*
h-r ... *heavy rain*
shs-r ... *showers of rain*

c-r denotes *continued rain*
c-h-r ... *continued heavy rain*
m-r ... *misty rain*
fr-m-r ... *frequent misty rain*
sl-r ... *slight rain*
h-shs ... *heavy showers*
fr-shs ... *frequent showers*
fr-h-shs ... *frequent heavy showers*
li-shs ... *light showers*
oc-shs ... *occasional showers*
oc-h-shs ... *occasional heavy showers*
sq ... *squall*
sqs ... *squalls*
fr-sqs ... *frequent squalls*
h-sqs ... *heavy squalls*
fr-h-sqs ... *frequent heavy squalls*
sc ... *scud*
li-sc ... *light scud*
sl ... *sleet*
sn ... *snow*
oc-sn ... *occasional snow*
sl-sn ... *slight snow*
s ... *stratus*
t ... *thunder*
t-s ... *thunder storm*
th-cl ... *thin clouds*
v ... *variable*
vv ... *very variable*
w ... *wind*
st-w ... *strong wind*

The foot-notes show the means and extremes of readings, and their departure in each month from average values, as found from the preceding Twenty-three Years' Observations; those relating to Humidity have been calculated from the Third Edition of Glaisher's Hygrometrical Tables.

§ 17. *Details of the Chemical Operations for the Photographic Records.*

Mr. Glaisher has drawn up the following account of the Chemical Processes employed in the Photographic Operations for the self-registration of the Magnetical and Meteorological Indications.

CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR PRIMARIES.

The paper used is similar to that made by Whatman; it is made by his successor Hollingsworth; it is strong and of even texture, and is prepared expressly for Photographic purposes.

First Operation.—Preliminary Preparation of the Paper.

The chemical solutions used in this process are the following:—

(1.) Sixteen grains of Iodide of Potassium are dissolved in one ounce of distilled water.

(2.) Twenty-four grains of Bromide of Potassium are dissolved in one ounce of distilled water.

(3.) When the crystals are dissolved, the two solutions are mixed together, forming the iodising solution. The mixture will keep through any length of time. Immediately before use, it is filtered through filtering paper.

A quantity of the paper, sufficient for the consumption of several weeks, is treated in the following manner, sheet after sheet.

The sheet of paper is pinned by its four corners to a horizontal board. Upon the paper, a sufficient quantity (about 50 minims, or $\frac{5}{48}$ of an ounce troy) of the iodising solution is applied, by pouring it upon the paper in front of a glass rod, which is then moved to and fro till the whole surface is uniformly wetted by the solution. Or, the solution may be evenly distributed by means of a camel's hair brush.

The paper thus prepared is allowed to remain in a horizontal position for a few minutes, and is then hung up to dry in the air; when dry, it is placed in a drawer, and may be kept through any length of time.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

A solution of Nitrate of Silver is prepared by dissolving 50 grains of crystallized Nitrate of Silver in one ounce of distilled water. In hot weather a few drops of Acetic Acid are added.

Then the following operation is performed in a room illuminated by yellow light.

The paper is pinned as before upon a board somewhat smaller than itself, and (by means of a glass rod, as before,) its surface is wetted with 50 minims of the nitrate of silver solution. It is allowed to remain a short time in a horizontal position, and, if any part of the paper still shines from the presence of a part of the solution unabsorbed into its texture, the superfluous fluid is taken off by the application of blotting paper.

The paper, still damp, is immediately placed upon the interior glass cylinder, and is covered by the exterior glass cylinder, and the united cylinders are mounted upon the revolving apparatus, to receive the spot of light formed by the mirror, which is carried by the magnet; or to receive the line of light passing through the thermometer tube.

Third Operation.—Development of the Photographic Trace.

When the paper is removed from the cylinder, it is placed as before upon a board, and a saturated solution of Gallic Acid, to which a few drops of Aceto-Nitrate of Silver are added, (in hot weather this solution is used at the temperature of the air, in cold weather it is heated to the temperature of 70° or 80°, or even higher if the weather is very cold,) is spread over the paper by means of a glass rod, and this action is continued until the trace is fully developed. When the trace is well developed, the paper is placed in a vessel with water, and repeatedly washed with several waters; a brush being passed lightly over both sides of the paper to remove any crystalline deposit.

Fourth Operation.—Fixing the Photographic Trace.

The Photograph is placed in a solution of Hyposulphite of Soda, made by dissolving four or five ounces of the Hyposulphite in a pint of water; it is plunged completely in the liquid, and allowed to remain from one to two hours, until the yellow tint of the Iodide of Silver is removed. After this the sheet is washed repeatedly with water, allowed to remain immersed in water for 24 hours, and afterwards placed within folds of cotton cloths till nearly dry. Finally it is placed between sheets of blotting-paper, and is pressed.

Chemical Preparation and Treatment of the Photographic Paper for Secondaries.

The paper used is made by Rive; it is a strong wove paper of tolerably even texture, thin, but able to bear a great deal of wear.

First Operation.—Preliminary Preparation of the Paper.

The chemical solution required for this purpose is as follows:—

Two grains of Chloride of Ammonium are dissolved in one ounce of distilled water.

A sufficient quantity of this solution is placed in a flat-bottomed porcelain dish, and sheets of paper, one by one, are plunged within it; care being taken that no air bubbles remain between the paper and the solution; this may be prevented by slight pressure over the sheet by means of a bent glass rod. When a few sheets are thus immersed, they are turned over, and are taken out and hung to dry. Any number of sheets may thus be prepared.

An equally good result is obtained, by spreading over one side by means of a glass rod, as in the preparation of the Primaries, a solution of Chloride of Ammonium made by dissolving five grains in one ounce of distilled water.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

The solution required for this purpose is as follows:—

To a filtered solution of Nitrate of Silver, (made by dissolving 50 grains of Crystallized Nitrate of Silver in one ounce of distilled water,) some strong solution of Ammonia is added; the whole becomes at first of a dark brown colour, but when a sufficient quantity of Ammonia is added the solution becomes perfectly clear; a few crystals of Nitrate of Silver are then added till the solution is a little dull, forming "Ammoniacal Nitrate of Silver;" it is then ready for use.

The following operation is performed in a room illuminated by yellow light:—

By means of a glass rod this solution is spread over the paper, whilst pinned on a board; the paper is dried before a fire, and is then in a fit state to be used for producing a Secondary.

Third Operation.—Formation of the Photographic Copy.

A sheet of the paper so prepared is placed in a printing frame with its prepared side upwards, upon a bed of blotting paper resting upon a sheet of plate-glass; the Primary is then placed on the paper with its own face downwards; and as it is necessary, for obtaining a correct copy of the Primary, that it should be in close contact with the prepared surface, a second sheet of plate-glass is placed over it, and the two are pressed together by clamps and screws. The whole is then exposed to the light (the Primary to be copied being above the paper on which the copy is to be made). The time required to produce a copy depends, in a great measure, upon the thickness of the paper on which the Primary is made, and on the actinic quality of the light; a period of five minutes in a bright sunshine, or one hour in clear daylight, is generally sufficient.

Fourth Operation.—Fixing the Photographic Secondary.

When an impression has been thus obtained, it is necessary that the undecomposed Salts of Silver remaining in the paper be removed.

For this purpose the Secondary is at once plunged into water and well washed on both sides, passing a camel's hair brush over every part of it; it is then plunged into a solution of Hyposulphite of Soda (made by dissolving two or three ounces of the Hyposulphite in a pint of water), and is left through a period varying from half an hour to an hour. It is then removed, and washed in plain water several times; and running water is allowed to pass over it for twenty-four hours.

The sheets are then placed within the folds of drying cloths, till nearly dry, and finally between sheets of blotting paper.

The process of obtaining a Tertiary from a Secondary is in every respect the same as that of obtaining a Secondary from a Primary.

§ 18. *Personal Establishment.*

The personal establishment during the year 1864 has consisted of James Glaisher, Esq., F.R.S., Superintendent of the Magnetical and Meteorological Department, and Mr. William Carpenter Nash, Assistant.

Three or four computers have usually been attached to the Department.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

OF THE

MAGNETIC DIP.

1864.

MAGNETIC DIP, observed at the ROYAL OBSERVATORY, GREENWICH, chiefly with AIRY'S DIP APPARATUS, in the Year 1864.

Day and Approximate Hour, 1864.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″	
January 22. 0	C 4	6 inches	(68. 0. 12)	N
22. 2	D 4	3 ,,	(68. 1. 6)	N
27. 2	C 4	6 ,,	(67. 59. 14)	N
27. 23	B 4	9 ,,	(67. 49. 3)	N
28. 2	D 4	3 ,,	(68. 2. 49)	N
February 8. 2	D 1	3 ,,	68. 0. 34	N
16. 2	D 4	3 ,,	(68. 2. 42)	N
16. 23	D 2	3 ,,	68. 4. 28	N
17. 0	D 3	3 ,,	68. 29. 7	N
17. 2	C 4	6 ,,	(68. 0. 57)	N
18. 0	C 1	6 ,,	68. 11. 37	N
March 11. 2	C 4	6 ,,	(68. 1. 27)	N
16. 0	C 3	6 ,,	68. 16. 43	N
17. 0	C 2	6 ,,	68. 5. 37	N
17. 2	C 1	6 ,,	68. 10. 34	N
30. 0	C 4	6 ,,	(67. 59. 30)	N
30. 23	C 2	6 ,,	68. 5. 11	N
31. 0	B 4	9 ,,	(67. 49. 21)	N
31. 2	D 4	3 ,,	(68. 6. 14)	N
April 8. 2	C 4	6 ,,	(68. 2. 26)	N
11. 2	D 4	3 ,,	(67. 58. 53)	N
23. 1	D 4	3 ,,	(68. 2. 36)	N
23. 2	C 4	6 ,,	(67. 59. 33)	N
27. 0	B 4	9 ,,	(67. 45. 24)	N
30. 1	C 1	6 ,,	68. 7. 44	N
May 5. 22	B 1	9 ,,	68. 6. 50	N
6. 0	B 2	9 ,,	68. 9. 40	N
10. 1	D 2	3 ,,	67. 51. 2	N
12. 0	D 1	3 ,,	68. 5. 0	N
12. 2	D 4	3 ,,	(67. 59. 21)	N
17. 0	C 1	6 ,,	68. 10. 36	N
17. 2	C 4	6 ,,	(67. 59. 35)	N
18. 1	C 2	6 ,,	67. 59. 34	N
19. 0	B 4	9 ,,	(67. 45. 52)	N
19. 2	D 3	3 ,,	68. 10. 26	N
June 11. 0	C 4	6 ,,	(68. 4. 44)	N
14. 2	D 4	3 ,,	(68. 6. 20)	N
24. 0	D 1	3 ,,	68. 17. 23	N
27. 22	C 1	6 ,,	68. 12. 58	N
28. 1	D 2	3 ,,	68. 4. 16	N
29. 0	C 2	6 ,,	67. 57. 22	N
July 6. 23	B 1	9 ,,	68. 4. 20	N
7. 1	D 4	3 ,,	(68. 0. 59)	N
12. 23	C 4	6 ,,	(67. 59. 43)	N
13. 1	B 3	9 ,,	68. 12. 8	N
13. 23	B 4	9 ,,	(67. 47. 4)	N
14. 22	B 2	9 ,,	68. 4. 54	N
28. 23	D 2	3 ,,	68. 2. 15	N

Day and Approximate Hour, 1864.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″	
July 29. 2	C 4	6 inches	(68. 2. 55)	N
30. 2	D 4	3 ,,	(68. 5. 21)	N
August 10. 2	C 4	6 ,,	(67. 58. 20)	N
11. 2	D 2	3 ,,	68. 14. 41	N
26. 1	D 1	3 ,,	68. 17. 21	N
30. 2	D 4	3 ,,	(68. 3. 31)	N
September 8. 2	C 4	6 ,,	(67. 59. 21)	N
13. 0	C 1	6 ,,	68. 7. 56	N
14. 2	D 4	3 ,,	(68. 2. 25)	N
20. 23	C 2	6 ,,	68. 6. 21	N
21. 1	C 4	6 ,,	(68. 1. 41)	N
22. 23	B 4	9 ,,	(67. 49. 9)	N
23. 1	D 2	3 ,,	68. 2. 0	N
29. 2	D 4	3 ,,	(68. 3. 0)	N
October 7. 0	B 4	9 ,,	(67. 43. 59)	N
8. 1	C 4	6 ,,	(67. 59. 28)	N
17. 0	B 2	9 ,,	68. 5. 4	N
19. 0	B 3	9 ,,	68. 12. 48	N
20. 23	C 4	6 ,,	(68. 2. 37)	N
21. 1	B 4	9 ,,	(67. 47. 13)	N
31. 2	B 1	9 ,,	68. 0. 26	N
November 8. 0	C 4	6 ,,	(68. 3. 10)	N
10. 0	D 2	3 ,,	67. 59. 42	N
10. 1	43, A 1	$3\frac{1}{2}$,,	68. 5. 0	G
10. 1	45, A 1	$3\frac{1}{2}$,,	68. 4. 41	G
10. 1	44, A 1	$3\frac{1}{2}$,,	68. 6. 28	B S
10. 2	44, A 1	$3\frac{1}{2}$,,	68. 5. 43	G
10. 2	43, A 1	$3\frac{1}{2}$,,	68. 3. 20	B S
10. 2	D 2	3 ,,	68. 0. 32	W
10. 23	44, A 2	$3\frac{1}{2}$,,	68. 5. 47	G
10. 23	43, A 2	$3\frac{1}{2}$,,	68. 4. 37	N
11. 0	43, A 2	$3\frac{1}{2}$,,	68. 4. 26	G
11. 0	44, A 2	$3\frac{1}{2}$,,	68. 6. 58	N
18. 23	C 1	6 ,,	68. 3. 39	N
21. 0	B 4	9 ,,	(67. 51. 23)	N
23. 1	D 2	3 ,,	68. 6. 12	N
24. 23	B 1	9 ,,	68. 2. 37	N
25. 0	B 2	9 ,,	68. 3. 2	N
25. 1	C 1	6 ,,	68. 2. 32	N
25. 2	C 2	6 ,,	68. 5. 40	N
25. 2	D 2	3 ,,	68. 2. 40	N
26. 1	D 1	3 ,,	67. 59. 26	N
26. 2	D 4	3 ,,	(68. 3. 56)	N
December 6. 1	C 4	6 ,,	(68. 0. 45)	N
6. 2	B 1	9 ,,	68. 2. 5	N
8. 2	C 1	6 ,,	68. 4. 25	N
22. 0	B 1	9 ,,	67. 58. 57	N
22. 1	B 2	9 ,,	68. 4. 4	N
30. 1	C 1	6 ,,	68. 1. 59	N
30. 2	C 2	6 ,,	68. 3. 44	N
30. 3	D 1	3 ,,	67. 50. 5	N

The observations of Magnetic Dip with Airy's instrument, distinguished by the initial N, have been made throughout the year by Mr. W. C. Nash. One observation on November 10, with the initial W, was made by Mr. Whipple of the Kew Observatory.

On November 10 and 11, observations were made with two Kew Dip-Circles marked 43 and 44, by Mr. Glaisher, and Mr. Balfour Stewart, Director of the Kew Observatory. These observations are distinguished by the initials G and B S.

The agate edges of Airy's instrument were re-ground by Mr. Simms, between November 11 and November 18.

MONTHLY MEANS of MAGNETIC DIPS, observed at the ROYAL OBSERVATORY, GREENWICH, in the Year 1864.

AIRY'S DIP APPARATUS.

Month, 1864.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	B 3, 9-inch Needle, loaded.	Number of Observations.	B 4, 9-inch Needle, flat.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.	C 2, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January...	....	..	....	..	....	..	(67. 49. 3)	1	....	..	....	..
February..	....	..	....	..	....	..	....	..	68. 11. 37	1	....	..
March	....	..	....	..	....	..	(67. 49. 21)	1	68. 10. 34	1	68. 5. 24	2
April	....	..	....	..	....	..	(67. 45. 24)	1	68. 7. 44	1	....	..
May	68. 6. 50	1	68. 9. 40	1	....	..	(67. 45. 52)	1	68. 10. 36	1	67. 59. 34	1
June	....	..	....	..	....	..	....	..	68. 12. 58	1	67. 57. 22	1
July.....	68. 4. 20	1	68. 4. 54	1	68. 12. 8	1	(67. 47. 4)	1	....	..	....	..
August ...	....	..	....	..	....	..	....	..	....	..	....	..
September.	....	..	....	..	....	..	(67. 49. 9)	1	68. 7. 56	1	68. 6. 21	1
October ...	68. 0. 26	1	68. 5. 4	1	68. 12. 48	1	(67. 45. 36)	2	....	..	....	..
November .	68. 2. 37	1	68. 3. 2	1	....	..	(67. 51. 23)	1	68. 3. 6	2	68. 5. 40	1
December .	68. 0. 31	2	68. 4. 4	1	....	..	....	..	68. 3. 12	2	68. 3. 44	1
Means.	(68. 2. 13)	Sum 6	(68. 5. 2)	Sum 5	....	..	(67. 47. 41)	Sum 9	(68. 7. 4)	Sum 10	(68. 2. 57)	Sum 7

AIRY'S DIP APPARATUS.

Month, 1864.	C 3, 6-inch Needle, loaded.	Number of Observations.	C 4, 6-inch Needle, flat.	Number of Observations.	D 1, 3-inch Needle.	Number of Observations.	D 2, 3-inch Needle.	Number of Observations.	D 3, 3-inch Needle, loaded.	Number of Observations.	D 4, 3-inch Needle, flat.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January...	....	..	(67. 59. 43)	2	....	..	....	..	....	..	(68. 1. 58)	2
February..	....	..	(68. 0. 57)	1	68. 0. 34	1	68. 4. 28	1	68. 29. 7	1	(68. 2. 42)	1
March	68. 16. 43	1	(68. 0. 28)	2	....	..	....	..	....	..	(68. 6. 14)	1
April	....	..	(68. 1. 0)	2	....	..	....	..	....	..	(68. 0. 44)	2
May	....	..	(67. 59. 35)	1	68. 5. 0	1	67. 51. 2	1	68. 10. 26	1	(67. 59. 21)	1
June	....	..	(68. 4. 44)	1	68. 17. 23	1	68. 4. 16	1	....	..	(68. 6. 20)	1
July.....	....	..	(68. 1. 19)	2	....	..	68. 2. 15	1	....	..	(68. 3. 10)	2
August ...	....	..	(67. 58. 20)	1	68. 17. 21	1	68. 14. 41	1	....	..	(68. 3. 31)	1
September.	....	..	(68. 0. 31)	2	....	..	68. 2. 0	1	....	..	(68. 3. 43)	2
October ...	....	..	(68. 1. 3)	2	....	..	....	..	....	..	....	..
November .	....	..	(68. 3. 10)	1	67. 59. 26	1	68. 2. 16	4	....	..	(68. 3. 56)	1
December .	....	..	(68. 0. 45)	1	67. 50. 5	1	....	..	....	..	....	..
Means.	....	..	(68. 0. 52)	Sum 18	(68. 4. 35)	Sum 6	(68. 2. 29)	Sum 10	....	..	(68. 2. 58)	Sum 14

Month, 1864.	KEW DIP CIRCLE, No. 43. A 1, 3½-inch Needle.	Number of Observations.	A 2, 3½-inch Needle.	Number of Observations.	KEW DIP CIRCLE, No. 44. A 1, 3½-inch Needle.	Number of Observations.	A 2, 3½-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″		° ′ ″	
January...	....	..	....	..	....	..	....	..
February..	....	..	....	..	....	..	....	..
March	....	..	....	..	....	..	....	..
April	....	..	....	..	....	..	....	..
May	....	..	....	..	....	..	....	..
June	....	..	....	..	....	..	....	..
July.....	....	..	....	..	....	..	....	..
August ...	....	..	....	..	....	..	....	..
September.	....	..	....	..	....	..	....	..
October ...	....	..	....	..	....	..	....	..
November .	68. 4. 20	3	68. 4. 32	2	68. 6. 6	2	68. 6. 23	2
December .	....	..	....	..	....	..	....	..
Means.	....	..	....	..	....	..	....	..

For this table the monthly means have been formed without reference to the hour at which the observation was made on each day, as in preceding years no certain difference was found between observations taken at 21^h and at 3^h.

In combining the monthly results, to form the annual means, weights have been given proportional to the number of observations.

The means in brackets have been found by applying to the mean of the observed results a correction deduced by taking the difference between the mean result for the same months and that of the whole year, given by C 4.

YEARLY MEANS of MAGNETIC DIPS for each of the NEEDLES, and GENERAL MEAN for the Year 1864.

Lengths of the several Sets of Needles.	Needles.	Number of Observations with each Needle.	Yearly Means uncorrected.			Yearly Means reduced to the middle of the Year.		
			Mean Yearly Dip from Observations with each Needle.	Mean Yearly Dip from each Set of Needles, excluding the flat Needles.	Mean Yearly Dip from all the Sets of Needles, excluding the flat Needles.	Adopted mean Yearly Dip for each Needle.	Mean Yearly Dip from each Set of Needles, excluding the flat Needles.	Mean Yearly Dip from all the Sets of Needles, excluding the flat Needles.
			° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″
9-inch Needles	B 1	6	68. 2.32			68. 2.13		
	B 2	5	68. 5.21	68. 3.49		68. 5. 2	68. 3.38	
	B 4	9	(67.47.36)			(67.47.41)		
6-inch Needles	C 1	10	68. 7.24			68. 7. 4		
	C 2	7	68. 3.21	68. 5.44	68. 4.23	68. 2.57	68. 5. 0	68. 4. 3
	C 4	18	(68. 0.52)			(68. 0.52)		
3-inch Needles	D 1	6	68. 4.58			68. 4.35		
	D 2	10	68. 2.47	68. 3.36		68. 2.29	68. 3.32	
	D 4	14	(68. 2.57)			(68. 2.58)		

The observations with the loaded needles B_3, C_3, and D_3, have been too few in number for the formation of yearly means for those needles.
The results for the flat needles B_4, C_4, D_4, though perfectly consistent among themselves, are affected by constant errors, different for the different needles, which diminish the apparent dip, as is explained in the Introduction.

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1864.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE, made with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1864.	Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
	ft.	°	° ′ ″	s		°	
January 29	1·0 1·3	48·1	14. 40. 55 6. 37. 53	4·959 4·960	100 100	49·0 54·0	N
February 2	1·0 1·3	46·1	14. 41. 39 6. 38. 32	4·949 4·960	100 100	49·8 49·5	N
February 9	1·0 1·3	31·9	14. 43. 3 6. 39. 3	4·958 4·953	100 100	33·6 35·8	N
March 29	1·0 1·3	48·8	14. 39. 14 6. 37. 8	4·954 4·959	100 100	50·2 53·9	N
April 13	1·0 1·3	58·2	14. 35. 46 6. 35. 28	4·970 4·971	100 100	58·3 61·7	N
April 26	1·0 1·3	58·2	14. 36. 45 6. 36. 10	4·963 4·970	100 100	59·3 61·5	N
May 10	1·0 1·3	59·7	14. 39. 0 6. 37. 5	4·955 4·970	100 100	60·5 62·6	N
June 9	1·0 1·3	69·8	14. 41. 54 6. 36. 43	4·983 4·983	100 100	73·8 72·0	N
June 21	1·0 1·3	67·7	14. 30. 45 6. 33. 14	4·981 4·975	100 100	69·1 69·0	N
July 6	1·0 1·3	64·8	14. 30. 53 6. 31. 0	4·980 4·982	100 100	65·8 65·8	N
July 27	1·0 1·3	72·7	14. 27·10 6. 31. 36	4·991 4·991	100 100	73·2 78·9	N
August 12	1·0 1·3	72·3	14. 22. 39 6. 29. 44	4·995 4·996	100 100	72·6 77·7	N
August 24	1·0 1·3	61·3	14. 26. 48 6. 31. 44	4·996 4·999	100 100	59·2 64·5	N
September 15	1·0 1·3	65·1	14. 21. 23 6. 29. 17	4·998 4·998	100 100	67·1 70·0	N
October 4	1·0 1·3	61·6	14. 20. 2 6. 28. 24	5·010 5·008	100 100	64·9 63·9	N
October 18	1·0 1·3	60·8	14. 20. 2 6. 28. 40	5·006 5·014	100 100	62·7 62·0	N
November 9	1·0 1·3	46·7	14. 19. 24 6. 28. 16	5·006 5·019	100 100	53·5 47·8	N
December 8	1·0 1·3	47·7	14. 18. 48 6. 27. 48	5·012 5·013	100 100	49·7 52·9	N
December 27	1·0 1·3	34·4	14. 17. 21 6. 27. 41	5·008 5·011	100 100	36·8 37·1	N

The position of the Deflecting Magnet with regard to the suspended Magnet is always that which was formerly termed "Lateral." The Deflecting Magnet is placed on the East side of the suspended Magnet, with its marked pole alternately E. and W., and it is placed on the West side with its pole alternately E. and W.; and the deflexion in the table above is the mean of the four deflexions observed in those positions of the magnets.

The lengths of 1 foot and 1·3 foot answer to 304·8 and 396·2 millimètres respectively.

The initial N is that of Mr. W. C. Nash.

In the following calculations, every observation is reduced to the temperature 35°.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE, from OBSERVATIONS with the KEW UNIFILAR INSTRUMENT.

Month and Day, 1864.	In English Measure.									Value of X in French Measure.
	Apparent Value of A.	Apparent Value of A'.	Apparent Value of P.	Mean Value of P.	Log. A corrected by the Application of Log. of Mean Value of P. = Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. $m X$.	Value of X.	Value of m.	
						s				
January 29	+0·12699	0·07521	−0·00212		9·10479	4·9595	0·26997	3·825	0·4868	1·763
February 2	+0·12705	0·07531	−0·00425		9·10518	4·9545	0·27072	3·826	0·4875	1·764
9	+0·12695	0·07523	−0·00387		9·10480	4·9555	0·26954	3·823	0·4866	1·763
March 29	+0·12677	0·07508	−0·00213		9·10404	4·9565	0·27050	3·830	0·4867	1·766
April 13	+0·12648	0·07488	−0·00155		9·10298	4·9705	0·26864	3·827	0·4851	1·764
26	+0·12662	0·07502	−0·00310		9·10360	4·9665	0·26937	3·827	0·4858	1·765
May 10	+0·12697	0·07521	−0·00270		9·10477	4·9625	0·27014	3·825	0·4869	1·764
June 9	+0·12761	0·07527	+0·00764		9·10603	4·9830	0·26741	3·808	0·4861	1·756
21	+0·12598	0·07459	−0·00136		9·10126	4·9780	0·26820	3·832	0·4839	1·767
July 6	+0·12593	0·07413	+0·01255	−0·00241	9·09984	4·9810	0·26724	3·834	0·4826	1·768
27	+0·12558	0·07435	−0·00137		9·09987	4·9910	0·26623	3·830	0·4820	1·766
August 12	+0·12493	0·07399	−0·00216		9·09770	4·9955	0·26536	3·836	0·4803	1·769
24	+0·12528	0·07422	−0·00313		9·09898	4·9975	0·26410	3·824	0·4803	1·763
September 15	+0·12459	0·07381	−0·00295		9·09658	4·9980	0·26447	3·837	0·4792	1·769
October 4	+0·12433	0·07360	−0·00098		9·09548	5·0090	0·26214	3·831	0·4773	1·766
18	+0·12431	0·07364	−0·00276		9·09558	5·0100	0·26183	3·829	0·4772	1·766
November 9	+0·12393	0·07338	−0·00178		9·09415	5·0125	0·26060	3·830	0·4758	1·766
December 8	+0·12386	0·07331	−0·00059		9·09381	5·0125	0·26066	3·832	0·4756	1·767
27	+0·12338	0·07313	−0·00418		9·09245	5·0095	0·26023	3·836	0·4746	1·769

In forming the mean value of P, the values for June 9 and July 6 have not been taken into account.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1864.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in
Jan. 1	..	29·842	35·5	30·9	32·9	21·0	39·0	30·5	43·2	41·0	11·9	16·0	8·4	− 3·6	NE	NE	7·0	0·0	1·5	275	0·0
2	Last Qr.	30·372	34·5	25·2	29·8	20·6	36·8	18·6	42·6	39·4	9·2	12·9	7·7	− 6·6	NE	NE : E	0·0	0·0	0·0	120	0·0
3	..	30·473	34·5	23·5	28·7	17·9	47·8	17·0	42·4	39·2	10·8	13·2	7·9	− 7·7	N : E	NE	2·7	0·0	0·3	198	0·0
4	..	30·362	32·8	22·0	27·8	20·9	44·0	18·0	41·6	38·4	6·9	11·2	5·6	− 8·5	NE	NE	3·0	0·0	0·4	241	0·0
5	..	30·161	33·5	21·7	26·6	14·7	47·2	17·2	41·6	38·4	11·9	16·3	8·8	− 9·5	ENE	E	2·0	0·0	0·2	126	0·0
6	..	30·095	28·1	15·0	21·1	10·4	35·0	7·0	41·4	38·2	10·7	16·5	6·0	−14·9	Calm	Calm	0·0	0·0	0·0	54	0·0
7	Greatest Declination S.	30·037	29·8	14·3	22·6	17·5	32·0	6·0	41·1	37·9	5·1	8·0	3·4	−13·2	Calm	Calm	0·0	0·0	0·0	63	0·0
8	..	29·862	31·8	23·7	27·3	20·9	42·0	22·0	40·8	39·6	6·4	10·4	2·7	− 8·2	Calm	Calm	0·0	0·0	0·0	83	0·0
9	New.	29·780	38·3	21·6	32·4	31·1	59·0	19·5	40·1	30·9	1·3	2·3	0·0	− 3·0	Calm	SE	0·0	0·0	0·0	157	0·0
10	Perigee.	29·883	45·6	36·6	40·1	35·6	64·0	31·6	40·6	31·4	4·5	6·5	1·0	+ 4·4	SE	SE	0·0	0·0	0·0	126	0·0
11	..	29·975	46·7	34·9	39·5	33·2	73·0	30·2	40·5	31·4	6·3	9·0	2·0	+ 3·9	SE	SE	1·5	0·0	0·1	201	0·0
12	..	29·982	41·4	32·2	37·2	35·0	55·0	25·0	38·8	33·0	2·2	5·3	0·0	+ 1·6	SE	Calm	0·0	0·0	0·0	77	0·0
13	In Equator.	30·170	38·0	35·9	36·9	35·9	39·6	33·7	38·2	33·4	1·0	1·4	0·0	+ 1·3	Calm	Calm	0·0	0·0	0·0	83	0·1
14	..	30·123	38·2	34·0	36·2	34·7	39·3	31·9	37·9	35·4	1·5	2·9	0·0	+ 0·6	Calm	Calm	0·0	0·0	0·0	66	0·0
15	First Qr.	30·151	34·5	29·9	32·5	29·5	39·4	25·7	37·8	35·6	3·0	4·8	1·4	− 3·0	Calm	SE	0·0	0·0	0·0	164	0·0
16	..	30·091	38·2	32·4	35·0	28·0	48·0	29·0	37·5	35·3	7·0	10·8	3·4	− 0·5	SE	SE	2·4	0·0	0·2	263	0·0
17	..	29·828	42·6	32·5	36·8	35·4	42·6	28·2	37·6	35·3	1·4	2·3	0·0	+ 0·9	SE	SE	3·0	0·0	0·3	98	0·2
18	..	29·969	44·8	38·0	41·3	40·7	45·0	38·0	37·8	36·0	0·6	1·3	0·0	+ 5·0	Calm	SE	0·0	0·0	0·0	112	0·0
19	..	30·064	48·2	40·7	44·4	40·8	68·9	38·4	38·0	35·4	3·6	6·3	1·0	+ 7·9	SSW	SW	2·8	0·0	0·3	342	0·0
20	Greatest Declination N.	30·081	47·8	43·6	45·2	42·3	57·5	43·1	39·6	37·5	2·9	4·6	1·7	+ 8·4	SW	SSW	4·0	0·0	0·6	426	0·1
21	..	29·823	48·8	41·3	45·3	42·2	55·2	41·0	41·1	39·7	3·1	6·3	1·4	+ 8·2	SW	WSW : SSW	4·5	0·0	0·7	384	0·0
22	..	29·668	53·0	44·4	49·9	47·2	55·7	41·2	42·3	40·0	2·7	4·6	1·3	+12·6	SW	SW	8·0	0·0	2·5	586	0·0
23	Full.	29·696	53·2	45·9	48·5	43·1	56·9	40·0	44·6	42·4	5·4	7·6	1·7	+11·0	SW	SW	12·0	0·0	1·7	230	0·0
24	Apogee	30·098	45·8	34·2	39·1	34·1	58·0	26·0	44·5	41·4	5·0	10·9	0·0	+ 1·3	NW : SW	SW	1·5	0·0	0·2	263	0·1
25	..	30·280	42·6	34·5	39·1	38·6	45·6	28·5	44·2	42·4	0·5	2·2	0·0	+ 1·1	SW	SW : S	1·0	0·0	0·0	178	0·0
26	..	30·084	45·8	35·1	40·4	34·3	74·6	26·0	44·7	42·4	6·1	9·2	1·0	+ 2·1	S : SSW	SW	1·5	0·0	0·1	319	0·0
27	In Equator	29·851	54·0	37·9	47·0	44·0	77·0	35·7	44·7	42·4	3·0	9·4	1·9	+ 8·7	SW	SW	4·4	0·0	1·5	438	0·0
28	..	29·782	49·5	40·5	44·5	36·6	68·7	31·7	45·6	43·4	7·9	12·0	4·2	+ 6·4	WSW	W : NW	6·0	0·0	1·6	363	0·0
29	..	30·276	42·2	27·8	34·2	26·1	60·5	17·0	44·8	42·6	8·1	12·5	5·0	− 3·7	N : NE	NE : ESE	3·5	0·0	0·3	143	0·0
30	..	30·319	41·0	24·0	32·8	27·5	68·7	15·3	44·6	42·4	5·3	9·4	0·8	− 4·8	SE : SW	SW : S	1·2	0·0	0·1	245	0·0
31	..	30·175	42·9	29·9	35·9	30·5	69·0	22·7	42·6	40·4	5·4	9·7	0·0	− 1·4	S: SW	SSW	1·0	0·0	0·0	225	0·0
Means	..	30·044	41·4	31·7	36·5	31·3	53·1	27·0	41·4	38·1	5·2	8·3	2·5	− 0·1	...	...	..	..	..	Sum 6649	Sum 0·88

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was 30in·483 on the 3rd; the first minimum in the month was 29in·771 on the 9th.
The second maximum ,, was 30in·184 on the 13th; the second minimum ,, was 30in·112 on the 14th.
The third maximum ,, was 30in·176 on the 15th; the third minimum ,, was 29in·815 on the 17th.
The fourth maximum ,, was 30in·139 on the 20th; the absolute minimum ,, was 29in·636 on the 23rd.
The fifth maximum ,, was 30in·303 on the 25th; the fifth minimum ,, was 29in·744 on the 28th.
The sixth maximum ,, was 30in·354 on the 30th.
The range in the month was 0in·847.
The mean for the month was 30in·044, being 0in·284 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 54°·0 on the 27th; the lowest was 14°·3 on the 7th; and the range in the month was 39°·7
The mean ,, of all the highest daily readings was 41°·4, being 1°·9 *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 31°·7, being 1°·9 *lower* than the average of the preceding 23 years.
The mean daily range was 9°·7, being *the same as* the average of the preceding 23 years.
The mean for the month was 36°·5 being 1°·8 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Jan. 1	w	w	10, cu.-s, ci.-cu	7,ci.-cu,ci,cu.-s : o : 9, ci, s
2	s	s : m : s, sp	10, sl.-sn	10,s,cu.-s,sl.-sn: 8, cu.-s, ci.-s : o
3	s	w : s	10, ci.-cu, sl.-sn	9,ci.-cu,ci,sl-sn : o
4	s	w	2, ci.-cu, cu.-s, ci	o : v : 10
5	m	w	10, ci.-cu, ci.-s	5, ci.-s, ci : o, h : o
6	s	s : s, sp. g.-cur	o, h., h.-fr	o, h : o, sl.-f, h.-fr : o, h.-fr
7	s, sp, g cur : s	s	o, h.-fr : 10, f, h.-fr	10, h, f : 10, ci.-cu, ci : 10, ci.-s
8	s	s, g.-cur: s	h.-fr : 5, ci, h	6, ci, h : 2, ci, h : o, th.-f
9	s	s : m : w	o, h, h.-fr : 10, ci.-cu	10 : 10
10	s	s : s, sp	8, ci, ci.-s	9, li.-cl : 3, li.-cl, sl.-f
11	w	v : o	4, ci, ci.-s	1, ci, ci.-cu : o
12	m	v : w, N	h.-fr : 3, ci, ci.-s	10, ci, ci.-s : 10, ci.-s, th.-r, sl.-f
13	m	o : m : s	10, ci.-s, oc.-r	10, f, th.-r : 10, f, th.-r
14	s : w	w : s	10, f, th.-r	10, f, th.-r : 10
15	o	s : o : w	10, ci.-s	10 : 10, th.-r
16	w	w	10 : 10	10 : 4,ci,ci.-cu,ci.-s: 10, ci.-cu, ci.-s
17	o	w : m	10 : 10, h.-r	10, th.-r : 10, th.-f
18	s	s	10, th.-f	10, f : 9, ci.-cu, ci
19	o	o	10, sl.-r	10, ci.-s : 8, ci, ci.-s : 10, sc, th.-r
20	o	o	10, shs.-r : 10, th.-r	10, ci.-s : 10, ci.-s
21	o	o	10 : 10, r : 7,ci.-cu,ci.-s	8,ci.-cu,ci.-s,cu: o : 10
22	o	o	10, sl.-r	10, ci.-s, cu.-s, w : 10, fr.-m.-r
23	o	o	10, st.-w : 10, ci.-cu, ci.-s	10, ci.-s : 10, r : 10, ci.-s, h.-r
24	o	o	10, h.-r : o	o : o
25	o	o	10, ci.-s, th.-f	10, ci.-s, sl.-f : v : 10, ci.-s
26	o	o	7, ci, ci.-cu, cu.-s	5, ci : o : 10, ci.-s, cu.-s
27	o	o	10 : 10, li.-cl, r	3,ci.-cu,cu,cu.-s,ci: 8, ci.-cu, ci : 10
28	w	o	4, ci	o : 10, ci.-s : 10, sl.-r
29	o	o : w	o, h	5, ci, ci.-cu : o : o
30	w	o : m	h.-fr : 10	9, ci.-cu, ci.-s : 1, ci : o, h, fr
31	w	w	o, h.-fr : 4, ci, h	2, ci : o, f

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 48°·6 on the 22nd; and the lowest was 7°·8 on the 5th.

The mean ,, was 31°·3, being 4°·0 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·176, being 0^{in}·028 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}.0, being 0^{gr}·4 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 82 (that of Saturation being represented by 100), being 7 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 561 grains, being 7 grains *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·8

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·2.

WIND.

The proportions were of N. 4, S. 11, W. 6, E. 10, and Calm 0. The greatest pressure in the month was 12^{lbs}·0 on the square foot, on the 23rd.

RAIN.

Fell on 11 days in the month, amounting to 0^{in}·88 as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·86 *less* than the average fall of the preceding 49 years.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Feb. 1	Last Qr.	30·055	46·3	31·0	39·2	36·9	67·4	21·1	42·1	39·9	2·3	7·7	0·0	+ 2·0	SSW	SSW	3·0	0·0	0·5	373	0·00
2	..	29·995	47·7	40·8	44·8	43·0	50·6	31·2	42·4	40·2	1·8	3·8	0·0	+ 7·8	SW	SW	6·0	0·0	1·0	499	0·00
3	Greatest Declination S.	29·872	50·0	39·8	45·4	41·6	63·0	37·0	42·6	40·4	3·8	7·4	0·0	+ 8·1	SW	WSW	8·0	0·0	1·5	321	0·03
4	..	30·036	42·8	31·6	35·5	27·8	53·3	24·1	41·6	39·4	7·7	11·4	1·3	— 2·2	WSW	NW : WSW	2·3	0·0	0·2	310	0·00
5	..	30·073	36·6	27·9	32·7	25·9	57·0	23·0	41·6	38·4	6·8	14·0	2·0	— 5·7	N	N	4·5	0·0	0·5	379	0·03
6	..	29·970	36·2	28·9	31·5	26·9	48·0	25·0	41·4	38·2	4·6	6·2	1·6	— 7·5	N	N	2·6	0·0	0·4	257	0·00
7	Perigee ; New.	29·759	34·6	24·5	28·4	24·0	63·0	17·7	41·2	36·4	4·4	8·1	0·0	—10·8	N	N	0·0	0·0	0·0	181	0·00
8	..	29·569	36·0	26·3	30·5	26·2	49·5	20·5	41·1	35·5	4·3	10·0	0·0	— 8·7	NW : N	N	0·0	0·0	0·0	260	0·01
9	In Equator.	29·439	35·7	22·8	28·3	22·9	44·2	14·2	40·6	35·4	5·4	11·2	1·5	—10·7	W	W : NW	0·0	0·0	0·0	40	0·00
10	..	29·310	40·0	20·1	30·3	23·1	62·0	12·1	39·8	34·5	7·2	15·0	0·0	— 8·4	SW : SE	NE : N	0·0	0·0	0·0	172	0·00
11	..	29·640	35·8	31·1	33·5	28·0	39·0	29·1	38·6	33·9	5·5	7·8	1·7	— 5·0	N	W : S	0·0	0·0	0·0	264	0·00
12	..	29·311	52·7	32·2	42·7	41·4	59·6	19·6	40·1	34·9	1·3	2·4	0·0	+ 4·4	S	SW	6·0	0·0	1·0	460	0·32
13	..	29·647	53·8	43·4	48·5	43·9	56·7	37·0	..	..	4·6	6·6	0·0	+10·3	SW	SW	21·0	0·0	3·8	492	0·00
14	First Qr.	30·119	53·3	37·0	44·0	39·2	72·5	31·1	..	35·4	4·8	12·2	0·0	+ 6·0	SW	SW	3·3	0·0	0·4	346	0·00
15	..	29·734	50·0	40·9	46·0	43·9	56·0	37·3	..	37·9	2·1	5·0	0·0	+ 7·9	SW	SW	4·0	0·0	0·6	417	0·00
16	Greatest Declination N.	29·592	50·6	37·2	43·2	38·7	69·6	34·0	..	38·4	4·5	9·2	1·0	+ 5·1	SW	W	6·0	0·0	0·6	346	0·05
17	..	29·876	44·8	32·3	37·5	29·8	64·0	26·2	..	38·9	7·7	13·0	1·2	— 0·7	W : NW	N	4·8	0·0	0·4	268	0·05
18	..	30·069	39·7	28·9	33·8	26·7	60·8	24·4	..	38·4	7·1	13·1	0·0	— 4·5	N	E : NE	3·0	0·0	0·2	267	0·00
19	..	30·157	34·4	26·4	28·9	18·1	61·0	23·2	..	38·4	10·8	13·9	7·0	— 9·5	NE	NE	4·0	0·0	0·4	269	0·01
20	Apogee	29·803	31·5	23·8	26·9	19·5	56·5	23·0	..	37·4	7·4	11·0	2·3	—11·6	NE	NE	1·5	0·0	0·1	255	0·01
21	..	29·534	33·3	26·0	29·6	18·8	38·0	25·2	..	..	10·8	12·3	9·0	— 8·9	NNE	N	1·0	0·0	0·1	172	0·00
22	Full	29·712	35·3	29·1	31·5	25·5	44·3	27·8	..	..	6·0	9·4	2·1	— 7·1	N	NE	0·0	0·0	0·0	48	0·00
23	..	29·782	37·0	25·0	30·5	27·3	49·5	18·5	..	..	3·2	7·5	0·0	— 8·4	Calm	NE	0·0	0·0	0·0	145	0·05
24	In Equator	29·809	39·3	24·4	32·2	27·3	46·4	16·2	37·6	35·4	4·9	10·1	0·0	— 6·9	NE	NE	2·5	0·0	0·3	253	0·01
25	..	29·819	37·8	31·9	34·7	30·3	46·0	31·1	36·6	34·4	4·4	7·4	1·2	— 4·8	NE	NE	3·0	0·0	0·2	214	0·10
26	..	29·785	37·3	33·7	35·5	33·7	40·5	30·9	37·1	34·9	1·8	2·0	1·2	— 4·2	NE	NNE	0·0	0·0	0·0	160	0·00
27	..	29·585	39·0	34·7	36·8	36·2	43·3	34·2	37·6	35·4	0·6	1·4	0·0	— 3·0	NE : ENE	E	0·0	0·0	0·0	155	0·00
28	..	29·507	50·0	37·1	42·3	41·3	50·0	33·3	38·1	35·9	1·0	5·3	0·0	+ 2·3	E	SE	0·0	0·0	0·0	17	0·00
29	..	29·482	43·3	36·9	40·0	39·4	49·1	30·0	38·6	36·4	0·6	1·2	0·0	0·0	E	SE : SW	0·0	0·0	0·0	94	0·08
Means	..	29·760	41·5	31·2	36·0	31·3	53·8	26·1	39·9	37·0	4·7	8·5	1·1	— 2·6	...	...	..	..	..	Sum 7434	Sum 0·76

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $30^{in}\cdot096$ on the 5th; the second maximum was $29^{in}\cdot674$ on the 11th; the third maximum was $30^{in}\cdot198$ on the 14th; the absolute maximum was $30^{in}\cdot211$ on the 19th; the fifth maximum was $29^{in}\cdot830$ on the 25th.

The first minimum in the month was $29^{in}\cdot864$ on the 3rd; the second minimum was $29^{in}\cdot284$ on the 10th; the absolute minimum was $29^{in}\cdot207$ on the 12th; the fourth minimum was $29^{in}\cdot582$ on the 16th; the fifth minimum was $29^{in}\cdot594$ on the 21st; the sixth minimum was $29^{in}\cdot468$ on the 29th.

The range in the month was $1^{in}\cdot004$.

The mean for the month was $29^{in}\cdot760$, being $0^{in}\cdot044$ *lower* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 53°·8 on the 13th; the lowest was 20°·1 on the 10th; and the range in the month was 33°·7.

The mean of all the highest daily readings was 41°·5, being 3°·6 *lower* than the average of the preceding 23 years.

The mean of all the lowest daily readings was 31°·2, being 2°·4 *lower* than the average of the preceding 23 years.

The mean daily range was 10°·3, being 1°·2 *less* than the average of the preceding 23 years.

The mean for the month was 36°·0, being 2°·9 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Feb. 1	w	o	h.-fr : 3, ci	2, ci : 9, ci.-cu, ci, cu : 10
2	o	o	10, sc	10, ci.-s, sl.-r : 10, ci.-s
3	o	o	10, oc.-shs	10, ci.-s, ci.-cu, oc.-r : 10, ci.-s, sl.-r
4	o	o	h.-fr : 1, ci	10 : 6, ci.-cu, cu.-s : o
5	o	o	sl.-sn : o	o : 10, sl.-sn : v v
6	o	o	10, sn	10, ci.-s, sl.-sn : 10, ci.-s : o
7	o	o : w	10, ci.-s	8,ci.-cu,ci.-s,cu.-s,sl.-sn: v v
8	w	o : w	10, sl.-sn	10 : 3,ci.-cu,cu.-s,cu,ci: o, h.-fr
9	m	m : o	h.-fr : 5, ci, h	9,ci.-s,ci.-cu,f: 6, ci.-cu, ci.-s : o, h
10	w	o : w	o, h	o : 10,ci.-cu,ci.-s,sn : 10
11	o	o : w : o	10, ci.-s	10, ci.-s : 10
12	o	o	10 : 10, h.-r	10, th.-r : o
13	o	o	10, ci.-s, sc	10, ci.-s, sc, th.-r, st.-w : o
14	o	o	2, li.-cl	7, cu, ci : 8, li.-cl, h, lu.-ha
15	o	o	10 : 10, ci.-s	10, th.-r : 10
16	o	o	10 : 10, th.-r	10, th.-r : v : 3, ci, ci.-cu
17	o	o : m : o	10, h.-r : 9, ci.-cu, ci	10, cu : 8,ci.-cu,ci,r,sn: o, h.-fr
18	o	o	3, ci	10, ci.-cu, cu.-s, oc.-sn : o
19	o	o	7, ci, ci.-s, oc.-sn	6, ci, ci.-cu, oc.-sn : 9, ci.-s, ci.-cu, oc.-sn
20	o	o	sl.-sn : 7, ci, ci.-s	10, oc.-sn : 7, ci, ci.-s : 10, ci.-s, sn
21	o	o	10, sl.-sn	10, oc.-sn : v : 10, sl.-sn
22	o	o	10, ci.-s, sl.-sn	10, ci.-s, glm : 10
23	o	o	10 : 10, sn	7, ci.-cu, ci : o : o
24	o	o	8, ci, ci.-cu, ci.-s	7, ci, ci.-cu : 10, ci.-cu, ci.-s : 10, sn
25	o	o	10, sn	10, ci.-s : 10, ci.-s
26	o	o	10, ci.-s	10, th.-r : 10, ci.-s
27	o	o	10 : 10, m.-r	10 : 10
28	o	o	10, ci.-s, sl.-r	10, ci.-s, th.-r : o
29	o	o	10	10, oc.-shs : 2, ci.-s, f

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 48°·8 on the 12th ; and the lowest was 17°·9 on the 21st

The mean „ was 31°·3, being 3°·5 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·176 being 0^{in}·028 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·0, being 0^{gr}·4 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 83 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 557 grains, being 3 grains *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 7·8.

OZONE.

The mean amount for the month, on a scale ranging from o to 10, was 0·9.

WIND.

The proportions were of N. 12, S. 6, W. 5, E. 6. and Calm 0. The greatest pressure in the month was 21^{lbs}·0 on the square foot on the 13th.

RAIN.

Fell on 12 days in the month, amounting to 0^{in}·76, as measured in the simple cylinder gauge partly sunk below the ground ; being 0^{in}·77 *less* than the average fall of the preceding 49 years.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Grass, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Mar. 1	Last Qr.	29·682	50·6	29·4	40·1	39·2	75·4	24·2	38·8	36·6	0·9	5·9	0·0	0·0	SE	SE : S	0·0	0·0	0·0	196	0·0
2	Greatest Declination S.	29·640	48·2	29·8	36·7	35·4	60·0	24·6	39·6	37·4	1·3	6·9	0·0	− 3·3	SE : NE	NE	0·0	0·0	0·0	250	0·0
3	..	29·469	41·8	35·2	38·0	37·8	52·3	35·2	40·6	38·4	0·2	0·9	0·0	− 1·9	E	E	1·5	0·0	0·1	66	0·2
4	..	29·402	58·0	40·6	47·7	44·5	88·0	39·0	41·6	39·4	3·2	11·2	0·0	+ 7·8	SW	SSW : S	0·0	0·0	0·0	150	0·3
5	..	29·227	46·2	38·9	41·5	41·4	51·0	33·6	41·6	39·4	0·1	0·7	0·0	+ 1·5	E	ENE	2·0	0·0	0·2	228	0·0
6	..	28·964	53·6	39·0	45·1	42·5	85·2	38·5	42·6	40·4	2·6	8·2	0·0	+ 5·0	ENE	SW	8·0	0·0	1·6	510	0·4
7	Perigee	28·900	52·0	42·9	46·1	40·0	76·0	41·3	43·6	41·4	6·1	10·1	1·0	+ 6·0	SSW	SW	13·0	0·0	2·2	319	0·0
8	New; In Equator.	28·971	48·5	38·0	41·7	39·8	62·0	37·8	44·6	42·4	1·9	3·2	0·2	+ 1·6	S	N : E	0·0	0·0	0·0	170	0·1
9	..	28·985	38·7	32·2	33·8	31·7	41·4	29·4	44·6	42·4	2·1	3·9	0·0	− 6·4	NNE	N	4·0	0·0	0·5	321	0·6
10	..	29·536	46·3	27·9	37·0	32·7	68·5	26·2	44·1	42·9	4·3	12·1	0·0	− 3·3	NW : SW	SSW	8·0	0·0	0·6	475	0·1
11	..	29·420	52·1	39·5	44·8	38·2	80·0	31·3	43·6	41·4	6·6	11·1	1·5	+ 4·3	SW	WSW	11·0	0·0	2·3	466	0·1
12	..	29·989	50·3	35·3	42·3	32·7	79·4	31·4	42·6	40·4	9·6	16·1	2·5	+ 1·7	WSW	WSW	3·5	0·0	0·3	323	0·0
13	..	30·043	51·3	35·2	44·8	39·0	80·0	29·5	43·6	41·4	5·8	12·8	0·0	+ 3·8	SW	SW	4·4	0·0	1·0	523	0·0
14	Greatest Declination N	29·865	57·2	44·4	49·5	41·0	83·7	38·7	44·6	42·4	8·5	13·6	2·4	+ 8·2	SW	SW	6·0	0·0	1·6	524	0·0
15	First Qr.	29·697	52·6	39·0	45·4	41·5	55·7	37·0	44·6	42·4	3·9	8·2	2·0	+ 3·9	WSW	WSW : N	7·0	0·0	1·8	176	0·0
16	..	29·987	48·2	33·6	40·2	31·0	82·2	30·4	45·1	42·9	9·2	16·4	0·0	− 1·5	NE	E : SE	0·0	0·0	0·0	200	0·0
17	..	29·940	49·8	31·7	39·7	30·3	82·2	25·5	45·6	43·4	9·4	18·9	0·0	− 2·1	SE	SE : E	1·0	0·0	0·0	199	0·0
18	..	29·634	47·1	29·9	38·4	31·3	82·7	21·1	45·7	43·5	7·1	13·7	0·0	− 3·4	E	E	0·0	0·0	0·0	203	0·0
19	Apogee	29·499	55·1	32·1	43·2	37·4	86·3	27·3	46·1	43·9	5·8	12·2	0·2	+ 1·4	E	E	0·0	0·0	0·0	148	0·0
20	..	29·467	57·6	31·3	44·5	39·9	91·0	21·7	45·1	43·9	4·6	13·3	0·0	+ 2·6	ENE	E	0·0	0·0	0·0	246	0·0
21	..	29·510	49·0	34·4	40·0	36·6	87·0	29·5	46·3	43·1	3·4	9·2	0·0	− 1·9	NE	NE	1·0	0·0	0·1	277	0·0
22	In Equator	29·522	44·5	37·5	40·5	35·0	54·7	35·8	45·8	43·6	5·5	8·4	1·6	− 1·4	NE	NE	1·5	0·0	0·2	305	0·0
23	Full	29·776	49·1	34·1	40·1	32·0	84·6	33·0	45·8	43·6	8·1	13·6	4·0	− 1·9	NE	NE : E	2·0	0·0	0·3	164	0·0
24	..	29·811	52·5	26·9	39·0	32·8	93·4	26·9	45·9	43·9	6·2	15·2	0·0	− 3·1	E	ESE	0·0	0·0	0·0	81	0·0
25	..	29·507	52·3	27·8	39·5	36·4	88·0	19·6	45·6	43·4	3·1	11·8	0·0	− 2·7	Calm	N : SW	0·0	0·0	0·0	146	0·0
26	..	29·391	44·3	35·1	38·9	33·9	54·7	28·3	45·1	42·4	5·0	7·0	2·5	− 3·4	SW : NNW	N by W	3·7	0·0	0·3	311	0·0
27	..	29·414	47·4	28·9	38·1	28·9	80·3	22·0	44·6	42·9	9·2	13·2	0·0	− 4·3	NNW	NNW : SW	2·0	0·0	0·1	293	0·0
28	..	29·126	47·8	34·9	41·1	33·1	58·0	28·7	44·6	42·4	8·0	12·6	3·0	− 1·5	SW	WSW : NW	8·0	0·0	0·9	488	0·1
29	Greatest Declination S.	29·192	49·7	33·2	39·2	31·2	87·0	28·0	44·6	42·3	8·0	13·0	3·6	− 3·6	NW	NNW	5·0	0·0	1·2	270	0·0
30	Last Qr.	29·419	47·4	31·8	38·2	34·9	52·0	22·0	44·5	42·3	3·3	8·8	0·0	− 4·8	SW	NW	2·3	0·0	0·2	246	0·1
31	..	29·597	53·6	32·7	44·3	40·5	83·0	23·1	44·1	41·6	3·8	12·8	0·0	+ 0·9	SW	SW	4·5	0·0	0·8	441	0·0
Means	..	29·503	49·8	34·3	41·3	36·2	73·7	29·7	44·0	41·9	5·1	10·3	0·8	+ 0·1	...	...	..	..	..	Sum 8715	Sum 2·53

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·709 on the 1st; the absolute minimum in the month was 28in·813 on the 7th.
The second maximum ,, was 29in·069 on the 7th; the second minimum ,, was 28in·870 on the 8th.
The third maximum ,, was 29in·101 on the 8th; the third minimum ,, was 28in·936 on the 9th.
The fourth maximum ,, was 29in·559 on the 10th; the fourth minimum ,, was 29in·380 on the 11th.
The absolute maximum ,, was 30in·109 on the 13th; the fifth minimum ,, was 29in·666 on the 15th.
The sixth maximum ,, was 30in·045 on the 16th; the sixth minimum ,, was 29in·470 on the 20th.
The seventh maximum ,, was 29in·876 on the 24th; the seventh minimum ,, was 28in·935 on the 28th.
The eighth maximum ,, was 29in·668 on the 31st.
The range in the month was 1in·296.
The mean for the month was 29in·503, being 0in·266 *lower* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 58°·0 on the 4th; the lowest was 26°·9 on the 24th.
The range ,, was 31°·1.
The mean ,, of all the highest daily readings was 49°·8, being 0°·4 *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 34°·3, being 1°·1 *lower* than the average of the preceding 23 years.
The mean daily range was 15°·5, being 0°·8 *greater* than the average of the preceding 23 years.
The mean for the month was 41°·3, being 0°·7 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
March 1	o	o	10, ci.-s, cu.-s	10, ci.-s, ci.-cu, r : 8, ci, ci.-cu : o
2	o	o	10, f : 10, th.-f	10 : 8, ci.-cu : 10
3	o	o	10 : 10, r	10, r : 10, c.-r : 10, h.-r
4	o	o	10, c.-h.-r : 10	8, ci.-s : 8, ci, ci.-s
5	w : m	o	10, sl.-r, f	10, ci.-s : 10, sl.-r
6	o	o	10, h.-r : 10, c.-h.-r : 10, th.-r	8, ci.-cu, ci, w : v v, th.-r, th-cl
7	o	o	10, sl.-r : 10, h.-shs : 9, cu.-s, ci.-cu	10, cu.-s, ci.-cu : 9, ci.-s, cu.-s, ci : 7, th-cl
8	o	o	10, h.-r : 10, ci.-s	10, glm, sl.-r : 10, oc.-r
9	o	o	10, : 10, h.-r : 10, c.-h.-r, sn	10, sn, sl : 10, th.-r
10	o	o	2, ci, h	5, ci, ci.-cu : 8, ci, ci.-cu, ci.-s, oc.-r : o
11	o	o	10, shs.-r : 1, cu.-s, ci.-s, ci, w	9, sl.-r, hl, w : 1, ci.-cu, ci : 10, oc.-r
12	o	o	o	8, ci, ci.-cu : 4, ci, ci.-cu : o
13	o	o	3, cu.-s, ci	9, ci, ci.-cu, ci.-s : 10
14	o	o	10, ci.-cu, cu.-s, ci.-s	10, cu.-s, ci.-s, ci.-cu : 10, w
15	o	o	10, w	10, ci.-cu, ci.-s : 10, fr.-shs : 10, ci.-s, cu.-s
16	o	o	o	1, ci, ci.-cu : o : o
17	o	o	10, ci.-s	8, ci.-s, ci, ci.-cu, cu.-s : o, h.-fr
18	o	o	o, h.-fr	o : o
19	o	w	o	2, ci : 3, ci : o
20	w	w	o : o	o : o
21	o	o : w	10	10, : 2, ci, ci.-cu : 10
22	w	o : w : o	10	10 : 10, sl.-r
23	o	o : m	10	7, ci, cu, ci.-cu : o : o
24	w	w : m	h.-fr : o, h	o : o
25	m	m : w	10, h, f	7, li.-cl, h : 3, li.-cl, h, f
26	o	o	10, ci.-s	10 : 10, r : 10
27	w	o	7, ci, cu, ci.-cu, cu.-s	6, ci, ci.-cu, cu : 10
28	o	o	10, ci.-cu, cu.-s	10, ci.-s, cu.-s : 10, hl, r
29	o	m : o	10, ci.-s, sl.-r	10, hl : 9, ci, cu, ci.-cu, cu.-s : o
30	o	o	10, sn	10, sl.-r : 10, li.-cl
31	o	o	7, ci, ci.-cu, ci.-s	10, ci.-cu, cu.-s, ci.-s : 10, ci.-cu, ci.-s, sl.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 48°·5 on the 4th; and the lowest was 25°·3 on the 27th.

The mean ,, was 36°·2, being 0°·6 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0in·215, being 0in·004 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2gr·5, being *the same as* the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 83 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 546 grains, being 4 grains *less* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 6·9.

OZONE.

The mean amount for the month, on a scale ranging from o to 10, was 1·1.

WIND.

The proportions were of N. 7, S. 6, W. 8, E. 8, and Calm 2. The greatest pressure in the month was 13lbs·0 on the square foot on the 7th.

RAIN.

Fell on 15 days in the month, amounting to 2in·53, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·95 *greater* than the average fall of the preceding 49 years.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
April 1	..	29·531	53·0	39·1	43·8	33·1	88·0	33·0	44·5	42·3	10·7	16·6	4·0	+ 0·2	WSW	WSW	7·0	0·0	0·8	431	0·1
2	..	29·794	54·4	33·8	42·1	31·7	82·5	22·9	44·6	42·4	10·4	18·3	3·9	— 2·0	WSW : NW	WNW : WSW	3·0	0·0	0·4	272	0·0
3	..	29·768	49·7	36·9	44·1	42·1	55·6	27·2	45·1	43·6	2·0	6·3	0·0	+ 0·4	SW	SW	2·3	0·0	0·2	295	0·0
4	Perigee; In Equator.	29·770	61·4	47·9	53·3	48·4	76·5	45·5	45·6	43·6	4·9	9·5	0·7	+ 8·3	SW : NW	NW : N	1·0	0·0	0·0	219	0·0
5	..	30·096	41·4	35·3	36·8	33·5	46·5	33·2	44·8	43·4	3·3	6·4	0·6	— 8·3	ENE	E	2·0	0·0	0·1	132	0·5
6	New.	30·071	48·5	35·0	41·2	37·6	83·7	34·5	45·6	43·4	3·6	7·1	1·3	— 4·2	E : SE	NNE	0·0	0·0	0·0	103	0·0
7	..	30·151	51·8	39·4	43·6	35·4	82·0	37·3	46·6	43·9	8·2	12·4	3·2	— 1·9	NNE : SE	SE	0·5	0·0	0·0	152	0·0
8	..	30·218	54·7	37·9	44·4	32·1	101·1	33·7	47·1	44·4	12·3	16·4	7·0	— 1·1	SE : S	SE : E	0·0	0·0	0·0	137	0·0
9	..	30·087	57·3	37·4	47·9	42·4	75·0	33·0	47·6	45·4	5·5	11·8	2·0	+ 2·5	SW	WSW : NW	0·0	0·0	0·0	106	0·0
10	..	30·017	58·5	46·3	51·1	45·4	78·7	44·0	49·0	46·4	5·7	9·3	0·6	+ 6·0	NW : N	NNE : SE	0·5	0·0	0·0	131	0·0
11	Greatest Declination S.	29·898	63·3	44·0	53·1	46·3	86·4	35·7	49·6	47·4	6·8	14·3	1·1	+ 8·1	SW	NW	0·0	0·0	0·0	166	0·0
12	..	29·917	60·1	40·9	48·1	38·6	96·6	32·6	50·6	48·4	9·5	17·5	3·0	+ 3·2	N	N : E	0·5	0·0	0·0	156	0·0
13	..	29·916	54·2	33·4	44·3	36·0	93·0	24·9	51·1	48·4	8·3	17·2	0·0	— 0·9	E	E	2·0	0·0	0·4	266	0·0
14	First Qr.	29·735	56·5	36·6	46·2	38·0	95·3	28·0	51·6	48·4	8·2	15·8	0·0	+ 0·7	E	E	2·5	0·0	0·2	205	0·0
15	..	29·555	68·5	36·9	52·8	39·6	104·6	34·2	52·6	48·4	13·2	24·7	1·0	+ 7·1	ESE : SE	SE : SW	0·0	0·0	0·0	155	0·0
16	Apogee.	29·565	51·5	44·8	46·9	45·—	57·2	39·3	53·6	49·4	1·2	2·4	0·8	+ 0·9	SW : WNW	Variable.	0·4	0·0	0·0	162	0·0
17	..	29·799	60·7	41·2	48·9	39·8	95·0	30·6	..	..	9·1	16·5	2·8	+ 2·7	N	NNW	0·8	0·0	0·0	211	0·0
18	In Equator	29·934	65·0	38·2	51·1	40·6	100·0	25·5	..	..	10·5	20·3	2·9	+ 4·7	SW	SW : S	1·0	0·0	0·0	258	0·0
19	..	29·829	68·0	42·1	55·9	38·8	103·6	..	..	..	17·1	26·5	6·2	+ 9·4	S	S	1·5	0·0	0·1	259	0·0
20	..	29·807	73·8	45·8	60·2	41·2	105·0	37·0	..	..	19·0	30·4	5·9	+13·5	S by E	S by E : SE	1·0	0·0	0·0	168	0·0
21	..	29·838	67·2	46·0	54·6	39·6	105·5	33·4	57·6	..	15·0	22·9	9·0	+ 7·6	SE	E	3·2	0·0	0·4	257	0·0
22	Full.	30·028	62·9	39·2	51·1	40·1	110·5	26·5	56·6	54·4	11·0	22·6	0·0	+ 3·8	ENE	ENE : ESE	0·5	0·0	0·0	158	0·0
23	..	30·079	66·4	35·5	51·5	41·8	117·8	23·3	58·5	52·4	9·7	22·9	3·0	+ 3·9	ESE	NE : SE	0·0	0·0	0·0	173	0·0
24	..	30·077	55·0	39·2	44·8	39·2	85·0	32·5	58·8	52·4	5·6	12·8	0·9	— 2·8	ESE : NE	NE : ESE	0·0	0·0	0·0	180	0·0
25	Greatest Declination N.	29·993	59·2	37·7	48·0	41·4	103·6	29·2	58·9	52·4	6·6	15·2	1·2	+ 0·4	Calm : NE	NE : E	0·0	0·0	0·0	104	0·0
26	..	29·997	56·9	40·0	48·0	41·7	69·1	..	58·0	53·4	6·3	12·8	0·0	+ 0·4	Calm : NE	NE : E	0·0	0·0	0·0	167	0·0
27	..	30·018	58·7	43·1	48·8	43·7	77·3	37·5	58·3	55·4	5·1	11·2	1·9	+ 0·8	NE	NE : E	0·5	0·0	0·0	176	0·0
28	..	29·958	50·0	41·9	44·4	40·5	59·0	39·0	58·5	55·8	3·9	7·6	1·6	— 4·1	NE	N by E	0·8	0·0	0·0	230	0·0
29	Last Qr.	29·968	62·4	41·7	49·5	42·4	93·0	39·2	58·6	56·1	7·1	16·3	2·4	+ 0·4	NNE	NNE : W	0·7	0·0	0·0	214	0·0
30	..	29·986	58·8	43·6	49·7	41·9	77·9	41·9	59·1	56·7	7·8	13·2	1·0	+ 0·2	N	NW : SE	1·0	0·0	0·0	110	0·0
Means	..	29·915	58·3	40·0	48·2	40·0	86·9	33·4	52·0	48·7	8·2	15·2	2·2	+ 2·0	...	...	..	..	..	Sum 5753	Sum 0·8

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute minimum in the month was 29in·500 on the 1st.

The first maximum in the month was 29in·846 on the 2nd; the second minimum ,, was 29in·709 on the 4th.
The second maximum ,, was 30in·125 on the 5th; the third minimum ,, was 30in·057 on the 6th.
The absolute maximum ,, was 30in·241 on the 8th; the fourth minimum ,, was 29in·537 on the 15th.
The fourth maximum ,, was 29in·950 on the 18th; the fifth minimum ,, was 29in·787 on the 19th.
The fifth maximum ,, was 30in·104 on the 24th; the sixth minimum ,, was 29in·908 on the 29th.

The range in the month was 0in·741.

The mean for the month was 29in·915, being 0in·165 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 73°·8 on the 20th; the lowest was 33°·4 on the 13th; the range in the month was 40°·4.

The mean ,, of all the highest daily readings was 58°·3, being 1°·3 *higher* than the average of the preceding 23 years.

The mean ,, of all the lowest daily readings was 40°·0, being 1°·3 *higher* than the average of the preceding 23 years.

The mean daily range was 18°·3, being 0°·1 *greater* than the average of the preceding 23 years.

The mean for the month was 48°·2, being 1°·7 *higher* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
April 1	o	o	10. h.-sh.s : 4, ci, ci.-cu	5. ci, ci.-cu : v, hl, r : 10, sl.-r
2	o	o : w	1. ci, ci.-cu	8, ci, ci.-cu, cu.-s : o
3	o	o	10, li.-cl	10, th.-r : 10
4	o	o : w : o	9	10, ci.-cu : 10
5	o	w : o	10, h.-r : 10, sl. r	10, c.-r : 10, c.-r
6	w	o	10, c.-r	10, ci.-s : 10
7	o	o : w : o	10	9. ci.-cu. ci.-s : 7, ci.-cu, ci, ci.-s: 10
8	o	o	10 : 10	4. ci, ci.-cu : 10, li.-cl
9	w	o : w	10	10 : 10
10	o	w : o	10 : 10	10 : v : o, m
11	w	o	10, ci.-s	6. li. ci. h : 10, ci.-cu, ci.-s : 6,li.-cl,ci.-cu,sl.-r
12	o	o	7, ci.-cu, ci.-s	o : 3, ci, ci.-cu : o
13	w	w	o	o, h : o
14	w	w : o	o : o	o : 1, ci : o
15	w	w	2, ci	o : 4. ci. ci.-cu : 10
16	o	m : o	10 : 10, r	10, r : 10
17	o	o	5, li.-cl, h	3, ci, ci.-cu : o
18	w	o	o : o	4, ci, ci.-cu : 1, ci, li.-ha
19	o	o : w	o	o : o
20	o	o	o	o : ci : o
21	o	o : w : o	2, ci	2, ci : o
22	o	o	o	o : o
23	o	o	o	o : o
24	o	o : w	10, ci.-cu, ci.-s	8, ci, ci.-cu. cu : o : 3, ci, ci.-s
25	o	o	6, ci, ci.-cu, cu	4, ci, h : 1. ci, h : o
26	o	o : m : o	10, ci.-s	10, ci.-s, sl.-r : 5, ci.-cu, ci.-s
27	o	o	10, ci.-s	10 : 9, ci, ci.-cu : 10
28	o	o : w	10, ci-s	10 : 10 : 6. ci.-s
29	o	o	10 : 10	6, li.-cl, h : 5, li.-cl, h
30	o	o	10, ci.-s	10, ci.-s : 10, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 51°·2 on the 4th; and the lowest was 30°·4 on the 2nd.

The mean ,, was 40°·0, being 0°·2 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·248 being 0^{in}·002 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·9, being *the same as* the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 74 (that of Saturation being represented by 100), being 5 *less* than the average of the preceding 23 years.

***Weight of a Cubic Foot of Air.*—The mean for the month was 547 grains, being 4 grains *greater* than the average of the preceding 23 years.**

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 5·6.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·1.

WIND.

The proportions were of N. 5, S. 5, W. 4, E. 7, and Calm 9. The greatest pressure in the month was 7^{lbs}·0 on the square foot on the 1st.

RAIN.

Fell on 4 days in the month, amounting to 0^{in}·82, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·94 *less* than the average fall of the preceding 49 years.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32 Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
May 1	Perigee	29·996	67·8	43·0	53·0	43·2	73·5	36·2	58·1	54·9	9·8	22·0	1·8	+ 3·0	SSE : SW	WSW	1·8	0·0	0·0	297	0·00
2	In Equator	29·649	64·5	49·3	55·7	52·0	82·0	46·0	58·3	55·6	3·7	10·5	0·0	+ 5·2	SW	W	3·5	0·0	0·7	300	0·11
3	..	29·652	59·5	47·6	51·6	46·7	77·6	46·4	(56·2)	(56·6)	4·9	9·3	0·0	+ 0·7	W	N : SE	4·1	0·0	0·4	211	0·16
4	..	29·705	50·5	44·0	46·5	44·5	59·0	..	(56·2)	(56·6)	2·0	3·8	0·0	— 4·8	SE	SE	0·8	0·0	0·0	136	0·10
5	..	29·822	57·2	44·9	49·1	44·4	74·2	42·0	57·1	52·9	4·7	10·6	0·4	— 2·5	S by E	SSE	0·0	0·0	0·0	104	0·00
6	New	29·762	69·6	42·8	55·4	47·3	113·8	31·1	57·8	54·7	8·1	18·0	1·1	+ 3·6	S	SSW : S	0·0	0·0	0·0	184	0·00
7	..	29·682	63·6	47·7	53·3	44·1	110·0	46·6	58·7	55·2	9·2	16·5	1·2	+ 1·4	SW : N	NNE : SE	1·0	0·0	0·0	157	0·31
8	Greatest Declination N.	29·572	54·3	38·5	47·0	42·0	83·0	28·8	58·1	55·9	5·0	11·6	0·0	— 4·8	ESE	E	3·2	0·0	0·4	321	0·07
9	..	29·514	48·2	44·9	45·4	42·7	50·0	42·0	56·9	54·7	2·7	3·8	0·8	— 6·2	ENE	E	2·0	0·0	0·1	165	0·21
10	..	29·755	61·5	45·1	51·2	40·5	85·5	40·7	56·8	54·6	10·7	16·9	3·3	— 0·2	E	NNE	2·0	0·0	0·0	317	0·00
11	..	29·721	55·0	46·3	49·6	46·9	70·8	45·5	56·7	54·5	2·7	5·8	0·0	— 1·7	NE	ENE	0·9	0·0	0·0	195	0·00
12	..	29·673	66·0	48·6	56·2	49·4	79·0	45·4	57·2	54·9	6·8	11·6	1·3	+ 4·9	NE	NE	0·8	0·0	0·0	219	0·00
13	First Quarter. Apogee	29·908	69·3	43·9	55·8	46·4	110·0	43·2	57·6	55·4	9·4	19·1	1·1	+ 4·4	N	N	0·0	0·0	0·0	142	0·00
14	..	30·022	70·2	42·6	56·8	46·4	117·5	40·0	58·8	55·8	10·4	21·1	0·0	+ 5·0	Calm	NE : SE	0·0	0·0	0·0	111	0·00
15	In Equator	29·990	74·8	52·6	63·5	54·5	111·0	39·4	59·6	56·4	9·0	17·8	1·8	+11·3	SW	Var.	0·0	0·0	0·0	67	0·00
16	..	30·052	71·8	49·0	60·0	46·8	119·0	39·2	59·7	56·4	13·2	26·1	0·0	+ 7·4	E	E	0·5	0·0	0·0	160	0·00
17	..	30·071	76·0	45·3	60·6	52·3	125·7	37·7	59·9	56·7	8·3	20·9	0·2	+ 7·8	E	E	0·0	0·0	0·0	100	0·00
18	..	30·079	81·0	48·0	65·7	53·9	128·2	45·6	60·1	58·1	11·8	25·8	0·0	+12·6	Calm	NE : SE	0·0	0·0	0·0	55	0·00
19	..	30·079	77·5	50·9	64·8	51·9	126·8	41·7	60·6	58·1	12·9	24·1	0·0	+11·5	Calm	E	0·0	0·0	0·0	117	0·00
20	..	29·938	80·0	48·5	65·2	52·8	126·2	38·7	60·9	58·4	12·4	24·5	0·6	+11·6	Calm : SW	SW : N	3·5	0·0	0·0	286	0·00
21	Full	29·877	61·6	49·6	52·9	48·7	68·2	44·0	61·8	58·4	4·2	11·4	2·0	— 0·9	NW : N	N : SW	2·5	0·0	0·0	208	0·21
22	Greatest Declination S.	29·840	70·2	49·4	58·0	47·3	103·1	41·3	63·6	62·4	10·7	17·3	2·5	+ 3·9	WSW	NNW	2·5	0·0	0·0	286	0·00
23	..	29·908	64·1	40·0	49·9	41·2	76·0	41·7	63·6	62·4	8·7	15·2	1·5	— 4·4	W : N	NNE	2·6	0·0	0·1	188	0·00
24	..	30·097	63·5	35·7	49·3	39·2	113·0	31·4	63·7	63·4	10·1	19·2	0·0	— 5·1	NE	NE	0·0	0·0	0·0	157	0·00
25	..	29·828	66·0	38·9	52·1	44·6	96·0	28·1	63·8	59·9	7·5	17·3	0·9	— 2·5	SW	NW : ESE	1·5	0·0	0·0	239	0·00
26	Perigee	29·868	59·1	45·2	49·4	36·8	76·2	42·0	63·1	59·9	12·6	18·1	6·6	— 5·3	NNE	NNE	1·0	0·0	0·0	250	0·00
27	..	29·859	64·2	44·7	53·4	39·8	106·0	44·6	62·6	59·4	13·6	20·1	6·0	— 1·5	N	NW : N	0·0	0·0	0·0	196	0·00
28	Last Qr.	29·863	61·2	45·8	51·8	42·0	90·0	36·9	62·6	59·4	9·8	19·6	5·7	— 3·4	N	N : SSW	0·0	0·0	0·0	203	0·00
29	In Equator	29·783	56·8	45·7	48·5	41·5	70·2	43·5	62·6	59·4	7·0	13·0	1·0	— 6·9	WSW	N	1·1	0·0	0·0	159	0·00
30	..	29·778	62·0	33·4	47·9	39·8	88·2	26·4	61·6	58·4	8·1	19·8	0·0	— 7·8	S	SSW	0·7	0·0	0·0	187	0·00
31	..	29·584	61·7	41·3	49·2	44·9	75·3	31·7	61·6	59·4	4·3	13·9	0·2	— 6·9	SW : N	N : NE	0·7	0·0	0·0	183	0·51
Means	..	29·837	64·8	44·9	53·8	45·6	93·1	39·6	60·1	57·4	8·2	16·3	1·3	+ 0·9	...	...	..	..	..	Sum 5900	Sum 2·00

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·040 on the 1st; the first minimum in the month was 29in·556 on the 3rd.
The second maximum ,, was 29in·776 on the 3rd; the second minimum ,, was 29in·696 on the 4th.
The third maximum ,, was 29in·834 on the 5th; the absolute minimum ,, was 29in·444 on the 9th.
The fourth maximum ,, was 29in·760 on the 10th; the fourth minimum ,, was 29in·638 on the 12th.
The fifth maximum ,, was 30in·106 on the 18th; the fifth minimum ,, was 29in·806 on the 20th.
The sixth maximum ,, was 29in·905 on the 21st; the sixth minimum ,, was 29in·803 on the 23rd.
The absolute maximum ,, was 30in·118 on the 24th; the seventh minimum ,, was 29in·773 on the 25th.
The eighth maximum ,, was 29in·927 on the 27th; the eighth minimum ,, was 29in·725 on the 29th.
The ninth maximum ,, was 29·in·868 on the 29th; the ninth minimum ,, was 29in·573 on the 31st.
The range in the month was 0·in674.
The mean for the month was 29in·837, being 0in·066 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 81°·0 on the 18th; the lowest was 33°·4 on the 30th.
The range ,, was 47°·6.
The mean ,, of all the highest daily readings was 64°·8, being 0°·3 *higher* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 44°·9, being 0°·7 *higher* than the average of the preceding 23 years.
The mean daily range was 19°·9, being 0°·4 *less* than the average of the preceding 23 years.
The mean for the month was 53°·8, being 0°·9 *higher* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
May 1	w	o	8, ci.-cu	7, ci.-cu, cu, h : 10, ci.-cu, ci.-s, sl.-r
2	o	o	10, r : 10	10 : 10, r
3	o	o	10, c.-r : 10	10 : 10, ci, ci.-s
4	o	o	10, r : 10, c.-r	10, sl.-r : 10, sl.-r
5	o	o	10	10 : v : o
6	o	o	4, ci, ci.-s	6, li.-cl : 7, ci, ci.-cu, ci.-s : 10
7	o	o : w	10, h-r : 4, cu, cu.-s, ci	2, ci, ci.-cu : 5, ci, ci.-cu : o
8	o	o	10, ci,-cu	10 : 10, r
9	o	o	10, oc.-r : 10, r	10, sl.-r : 10
10	o	o	10, ci.-s	10, ci.-s : v : 10
11	o	o	10, sl.-r	10 : 10
12	o	o	7, ci, ci.-cu, cu.-s	10, ci.-cu, ci.-s : 10, ci, ci.-s
13	o	o	4, ci, li.-cl	o : o, m
14	o	o	o : o	o : 4, ci, h : 2, li.-cl
15	w	o : s : w	9, li.-cl, h	8, ci, h : v, ci.-s, t, sl.-r : o
16	o	w : o : w	o : o	o : o
17	w	w : w	o : o	o : o
18	o	w : w	li.-cl : o, h	o, h : o
19	w	w : o : w	o : o	o : 3, ci
20	o	o : o : ss,P,N,sp,g,cur	li.-cl : 2, ci	o : 5, ci.-s : 10, t.-s, h.-r
21	o	o	10, t.-s, h.-r : 10, ci.-s, sl.-r	10 : 10, th.-r
22	o	o	4, ci, ci.-cu : 10, ci.-s, cu.-s, ci.-cu	6, ci, ci.-cu, cu.-s : 2, ci, ci.-s
23	o	o	8, ci, ci.-cu, ci.-s	10, ci.-s : 3, ci, ci.-s
24	o	o : w	6, ci, ci.-cu, cu	7, ci.-cu, cu : 4, ci, ci.-cu, cu.-s : 2, ci.-s
25	o	o	o : o	9, ci, ci.-cu, cu.-s : 10, ci.-s : 10
26	o	o : w	7, ci, ci.-cu, ci.-s	10, ci, ci.-cu, cu.-s : 7, ci.-cu, cu : 1, s, ci.-s
27	o	o	7, ci, ci.-s, ci.-cu	6, ci, ci.-cu, ci.-s, h : 4, li.-cl
28	o	o	9, li.-cl	7, ci, ci.-cu, cu.-s : 10 : 1, ci.-s, ci
29	o : m N	m : o	10 : 10, oc.-shs	10, oc.-r : 6, cu.-s, ci.-cu
30	o	o : w	10, cu, cu.-s	9, ci, ci.-cu, ci.-s, cu.-s, v : o
31	w	w : m : o	10	10, h.-r : 10, c.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·0 on the 15th; and the lowest was 37°·6 on the 26th.

The mean ,, was 45°·6, being *the same as* the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·306, being 0^{in}·003 *greater* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{grs}·5, being *the same as* the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 73 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 538 grains, being 5 grains *less* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·3.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·0.

WIND.

The proportions were N. 11, S. 6, W. 5, E. 6 and Calm 3. The greatest pressure in the month was 4^{lbs}·1 on the square foot on the 3rd.

RAIN.

Fell on 10 days in the month, amounting to 2^{in}·00, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·12 *less* than the average fall of the preceding 49 years.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (Corrected and reduced to 32° Fahr.).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Grass, as read by a Self-Registering Minimum Thermometer.	Lowest on the Grass, as read by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. next morning. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 13 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
June 1	..	29·622	60·7	42·8	50·2	43·8	81·2	33·0	61·6	59·4	6·4	12·4	0·0	— 6·2	NNE	ESE	0·0	0·0	0·0	103	0·00
2	..	29·[illegible]	60·2	42·3	51·[illegible]	39·4	88·4	33·0	61·8	59·5	11·6	20·3	0·4	— 5·6	NNE : NE	ESE : E	0·0	0·0	0·0	167	0·00
3	..	29·6[illegible]	56·3	48·1	50·3	46·2	62·5	32·1	60·7	58·6	4·1	6·8	2·2	— 6·5	ENE	NE	0·5	0·0	0·0	188	0·24
4	[illegible]	29·[illegible]61	68·4	44·8	55·[illegible]	47·3	82·0	44·2	61·1	58·6	8·2	19·1	0·4	— 1·6	N	NNE : S	0·0	0·0	0·0	150	0·00
5	[illegible]	29·[illegible]	69·0	45·5	56·7	47·5	110·7	36·4	59·7	58·4	9·2	18·2	0·9	— 0·4	SW	SW	1·7	0·0	0·1	318	0·00
6	..	29·842	73·1	52·2	59·7	49·7	106·7	49·7	60·1	58·9	10·0	19·3	1·6	+ 2·5	W	WSW	0·0	0·0	0·0	155	0·00
7	..	29·795	78·4	48·2	62·5	52·5	121·0	38·8	61·6	59·4	10·0	21·3	0·0	+ 5·2	SW	SW : SSE	0·0	0·0	0·0	105	0·00
8	..	29·733	75·5	52·3	62·4	54·5	108·0	50·2	62·8	60·5	7·9	18·7	0·0	+ 5·0	WSW : N	WSW	0·0	0·0	0·0	179	0·00
9	..	29·626	72·5	47·5	59·2	51·1	116·0	38·9	64·6	61·5	8·1	18·9	1·1	+ 1·7	SW	SW	0·9	0·0	0·0	212	0·00
10	Apogee	29·759	72·7	48·1	58·6	45·0	112·6	40·1	63·3	61·4	13·6	26·5	1·5	+ 0·9	W	SW	1·4	0·0	0·0	249	0·00
11	..	29·691	71·0	49·6	57·8	45·3	113·0	41·6	62·6	60·4	12·5	22·9	2·1	— 0·2	S : SW	SW	1·5	0·0	0·0	227	0·00
12	In Equator First Qr.	29·[illegible]	70·4	45·7	56·[illegible]	47·3	97·0	37·5	62·4	60·9	9·1	18·0	0·0	— 1·9	SSW	S	0·0	0·0	0·0	120	0·00
13	..	29·512	65·7	51·2	55·3	49·2	90·2	41·0	62·4	60·9	6·1	11·3	3·2	— 3·2	S	S : SSW	0·8	0·0	0·0	191	0·04
14	..	29·399	69·6	45·1	56·6	48·2	103·0	34·6	62·6	61·3	8·4	20·3	0·2	— 2·2	SSW	SSW	1·5	0·0	0·1	295	0·04
15	..	29·[illegible]	68·2	50·8	54·[illegible]	46·5	109·0	47·0	62·2	61·4	8·0	20·7	2·2	— 4·5	SSW : WSW	SW	2·7	0·0	0·0	265	0·15
16	..	29·759	74·1	46·0	59·3	50·5	94·5	44·8	62·4	61·4	8·8	20·4	2·7	0·0	WSW	WSW	1·0	0·0	0·0	267	0·00
17	..	29·936	73·6	50·5	60·7	55·1	103·5	43·0	62·0	61·0	5·6	15·3	0·4	+ 1·3	WSW	SW	1·5	0·0	0·0	347	0·00
18	..	29·916	71·6	56·2	61·6	46·3	106·9	56·2	62·5	61·2	15·3	22·0	4·0	+ 2·1	SW	W	2·6	0·0	0·2	323	0·16
19	[illegible]	30·10[illegible]	69·[illegible]	48·7	58·7	50·0	91·[illegible]	41·4	62·5	62·[illegible]	8·7	16·7	0·0	— 0·9	WSW : NW	WSW	0·0	0·0	0·0	244	0·00
20	..	30·058	73·6	50·5	61·[illegible]	49·9	118·4	40·7	61·9	60·4	11·2	20·0	3·8	+ 1·3	SW	SW	0·8	0·0	0·0	316	0·00
21	..	29·965	72·2	52·2	60·8	46·7	109·0	46·3	61·6	59·[illegible]	14·1	23·0	2·8	+ 0·9	SW	WSW	2·6	0·0	0·3	338	0·00
22	Perigee	29·960	69·5	49·0	57·5	51·3	91·2	39·[illegible]	62·1	60·0	6·2	15·8	1·2	— 2·5	WSW	SW	2·2	0·0	0·1	309	0·02
23	..	29·808	66·5	48·8	55·[illegible]	52·3	93·0	42·7	62·6	60·4	3·0	8·5	1·7	— 4·9	SW	SW : WSW	3·3	0·0	0·4	361	0·11
24	..	30·028	68·2	47·3	56·0	47·1	106·6	3[illegible]·0	62·8	60·6	8·9	19·1	2·8	— 4·4	W	WSW	2·3	0·0	0·2	333	0·00
25	In Equator	29·887	70·7	53·[illegible]	60·0	54·9	93·4	45·0	63·6	61·4	5·1	12·4	0·0	— 0·6	WSW	WSW	1·0	0·0	0·0	266	0·00
26	Last Qr.	29·772	70·2	53·6	56·6	48·5	98·8	50·0	63·6	61·4	8·1	16·0	0·0	— 4·2	SW : NW	W : NW	3·0	0·0	0·1	340	0·08
27	..	29·979	64·9	46·2	54·[illegible]	45·9	93·6	34·6	63·6	61·4	10·1	16·6	3·4	— 7·0	NNW	NNW : NW	1·5	0·0	0·0	224	0·00
28	..	29·964	67·7	47·1	55·3	50·2	83·[illegible]	38·3	64·1	61·4	5·1	18·2	0·0	— 6·0	WSW	WSW	0·0	0·0	0·0	208	0·04
29	..	29·829	71·5	53·4	59·9	53·1	91·4	52·6	62·8	60·7	6·8	17·3	0·0	— 1·6	WSW	SW	0·4	0·0	0·0	265	0·04
30	..	29·766	69·1	55·0	59·2	47·0	102·0	54·2	..	60·6	12·2	21·8	2·0	— 2·3	WSW : NNW	NW : W	2·1	0·0	0·2	304	0·00
Means	..	29·792	69·5	49·1	57·4	48·7	99·3	42·4	62·3	60·4	8·7	17·9	1·4	— 1·5	...	...	..	..	..	Sum 7369	Sum 0·92

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·855 on the 6th; the first minimum in the month was 29in·601 on the 9th.
The second maximum ,, was 29in·772 on the 10th; the absolute minimum ,, was 29in·353 on the 15th.
The third maximum ,, was 29in·797 on the 17th; the third minimum ,, was 29in·851 on the 18th.
The absolute maximum ,, was 30in·130 on the 10th; the fourth minimum ,, was 29in·779 on the 23rd.
The fifth maximum ,, was 30in·046 on the 24th; the fifth minimum ,, was 29in·751 on the 26th.
The sixth maximum ,, was 30in·005 on the 27th.
The range in the month was 0in·777.
The mean for the month was 29in·792, being 0in·005 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 78°·4 on the 7th; the lowest was 42°·3 on the 2nd; and the range in the month was 36°·1.
The mean ,, of all the highest daily readings was 69°·5, being 1°·4 *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 49°·1, being 1°·1 *lower* than the average of the preceding 23 years.
The mean daily range was 20°·4, being 0°·3 *less* than the average of the preceding 23 years.
The mean for the month was 57°·4, being 1°·7 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
June 1	0	0	10 : 9, ci.-cu, ci.-s	8, cu, ci.-cu, ci, ci.-s : 1, ci.-s
2	0	0	10	10 : 8, ci, ci.-cu,ci.-s : 10, ci.-s
3	0	0	10 : 10, r	10. c.-r : 10
4	0	0	4, ci, ci.-cu, h	2, ci, ci.-cu : 2, ci.-s
5	0	0	5, ci, ci.-cu	4, ci, ci.-cu : 10, ci.-s
6	0	0	8, ci, ci.-cu, cu	5, cu, ci.-cu, ci : 0
7	0	0	0 : 0	5, ci, ci.-cu. cu : 5, ci, ci.-s, cu.-s
8	0	0	10	10, ci.-s : 7,ci,ci.-s,ci.-cu, h : 8, ci.-cu,ci.-s
9	0	0 : w	7, ci, ci.-cu, cu	10,ci,ci.-s,ci.-cu,cu,cu.-s : 9, ci.-s
10	0	0	1, ci	5, ci,cu, ci-cu,cu.-s,ci.-s : 0
11	0	0	4, ci, ci.-cu	3, li.-cl : 7, ci, ci.-cu : 1, ci
12	0	0 : w	10, ci.-s, cu.-s	9, ci, ci.-cu, ci.-s : 3, ci, ci.-cu
13	0	sN,sP,sp,g-cur : 0	10, ci.-s	10, oc.-r : 9, ci.-cu,ci.-s,t,oc.-r : 0
14	0	0	8, ci, ci.-cu, cu.-s	9,ci,ci.-cu,cu,cu.-s,ci.-s : 10, r
15	w N	sN,sP,sp,g-cur : 0	10	v, ci, ci.-cu, hl, r, t, l : 7, ci.-cu, ci.-s, cu.-s
16	0	0 : w : 0	4, ci.-cu, cu	7, ci.-cu, cu : 2, ci, ci.-s
17	0	0	10, ci.-s	9, ci.-s, ci.-cu, ci : 10
18	0	0	10, h.-r : 7, ci.-cu, cu, cu.-s, ci	6, ci, ci.-cu, cu : 10
19	0	0 : w : 0	9, ci.-cu, cu	10, cu.-s, ci.-s : 5, ci.-cu, ci.-s
20	w	0 : w	7, ci, ci.-cu, ci.-s, cu.-s	2, ci, ci.-cu : 0 : 10, l
21	0	w N : 0	v : 7, ci, ci.-cu, cu.-s	6, ci, ci.-cu, cu, cu.-s : 0
22	0	0	9, ci, ci.-cu, cu	10, cu.-s,ci.-cu,ci.-s,oc.-shs : 2, th.-cl
23			10, li.-shs	10, oc.-r : 5, ci.-cu,ci.s,oc.-r : v
24			7, ci, ci.-cu, ci.-s	10, ci.-s : 10, sl.-r
25			10, ci.-s	10 : 10, ci.-s, cu.-s
26			10, r : 10, ci.-s	v. sh.-r : 1, ci, ci.-s
27			8, ci, ci.-cu, cu, ci.-s	8, ci.-cu, cu.-s: 10 : 2, ci, ci.-s
28			10	10, sl.-r : 10, r
29			10, sl.-r : 6, ci cu, ci.-s, h	10, ci.-s, cu.-s, h : 10, ci.-s, oc.-r
30			8, ci.-cu, cu	10, th.-cl : 3, ci, ci.-cu : 6,ci,ci.-cu,ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·9 on the 8th; and the lowest was 37°·5 on the 2nd.

The mean ,, was 48°·7, being 2°·1 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0in·344 being 0in·029 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3gr·0, being 0gr·3 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 72 (that of Saturation being represented by 100), being 3 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 533 grains, being 2 grains *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·0.

OZONE.

The mean amount for the month, on the scale ranging from 0 to 10, was 1·2.

WIND.

The proportions were of N. 4, S. 9, W. 15, E. 1, and Calm 1. The greatest pressure in the month was 3lbs·3 on the square foot on the 23rd.

RAIN.

Fell on 10 days in the month, amounting to 0in·92, as measured in the simple cylinder gauge partly sunk below the ground; being 1in·05 *less* than the average fall of the preceding 49 years.

ELECTRICITY.—From June 23 to 30, the insulating lamp was not burning.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo, placed on the Grass	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 6 inches (0.196 sq. ft.)
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
July 1	..	29·799	66·5	49·2	57·5	45·0	94·7	40·3	..	60·7	12·5	20·2	7·6	— 4·0	WSW : WNW	WNW : SW	2·0	0·0	0·1	243	0·00
2	Greatest Declination N	29·598	70·6	49·0	59·2	51·2	90·0	39·2	..	61·4	8·0	18·7	2·7	— 2·2	SW	SW	2·6	0·0	0·4	375	0·00
3	..	29·540	66·1	49·8	56·4	48·9	101·3	43·2	..	61·2	7·5	13·3	1·3	— 5·0	SW	WSW : WNW	3.1	0·0	0·4	305	0·01
4	New	29·849	71·6	46·3	57·9	47·7	108·7	38·8	..	60·9	10·2	23·8	1·9	— 3·6	WSW	WSW	0·8	0·0	0·0	299	0·00
5	..	29·879	74·1	46·5	59·7	44·8	109·4	35·8	..	60·9	14·9	28·1	0·0	— 1·9	SW : NW	NW	1·6	0·0	0·1	278	0·00
6	..	29·997	68·6	46·4	56·5	47·0	91·4	36·2	..	61·0	9·5	20·2	1·7	— 5·2	NNW	N : NE	0·0	0·0	0·0	106	0·00
7	..	29·978	71·9	50·8	57·3	48·9	85·6	49·6	..	61·4	8·4	19·3	3·2	— 4·5	Variable	N : NNE	0·0	0·0	0·0	173	0·00
8	Apogee	29·998	61·2	45·8	53·5	47·6	78·4	37·0	..	61·0	5·9	13·3	1·1	— 8·2	N	N : NNE	0·0	0·0	0·0	171	0·00
9	In Equator	29·925	64·0	46·3	54·3	47·8	90·9	..	..	60·4	6·5	14·8	1·1	— 7·2	NNE	NE	0·0	0·0	0·0	194	0·00
10	..	29·907	72·8	50·6	59·9	53·8	93·0	50·4	..	60·3	6·1	16·6	0·0	— 1·6	NE	ENE : NE	2·7	0·0	0·2	266	0·00
11	..	29·913	79·0	52·4	66·1	55·9	112·2	50·2	..	60·7	10·2	23·5	2·0	+ 4·5	NNE : NE	E : N	2·2	0·0	0·1	233	0·00
12	First Qr.	29·938	77·5	51·8	60·8	51·8	111·9	47·4	..	62·4	9·0	22·6	0·0	— 0·9	N	NNE : E	0·0	0·0	0·0	211	0·00
13	..	29·882	68·5	50·0	57·3	49·4	93·0	46·0	..	62·1	7·9	17·8	0·0	— 4·5	NNE	NE : E	1·0	0·0	0·0	160	0·00
14	..	29·945	78·1	47·8	59·8	49·1	110·7	42·7	..	62·4	10·7	26·4	0·4	— 1·9	NNE	NNE : SE : SW	0·0	0·0	0·0	72	0·00
15	..	29·948	77·7	45·8	61·7	49·9	111·8	37·2	..	62·3	11·8	25·7	0·0	0·0	Calm : NE	E	0·0	0·0	0·0	169	0·00
16	Greatest Declination S.	29·987	73·7	50·3	59·9	52·5	110·4	43·9	..	62·4	7·4	18·7	0·0	— 1·8	E	NE : E	0·0	0·0	0·0	106	0·00
17	..	29·959	81·1	48·5	64·5	53·8	114·0	46·9	..	63·4	10·7	24·7	0·0	+ 2·8	Calm	NE : SE	0·0	0·0	0·0	84	0·00
18	..	29·930	80·8	52·3	65·4	54·3	116·8	45·1	..	64·4	11·1	24·1	0·0	+ 3·7	NE	NNW : N	0·0	0·0	0·0	144	0·00
19	Full	29·929	83·5	59·5	68·9	57·4	96·9	54·0	..	64·9	11·5	24·1	3·6	+ 7·2	SW	Variable	0·0	0·0	0·0	113	0·00
20	Perigee	29·879	85·6	55·7	69·8	55·0	115·8	48·1	..	65·4	14·8	29·1	0·0	+ 8·2	WSW	WSW : SW	0·0	0·0	0·0	188	0·00
21	..	29·737	80·6	55·0	67·0	53·9	112·7	50·0	..	65·5	13·1	25·7	2·0	+ 5·5	SW	SW	1·8	0·0	0·1	296	0·00
22	In Equator	29·736	74·5	53·5	63·7	53·8	95·0	45·0	..	65·4	9·9	21·1	0·8	+ 2·2	SW	SW	2·0	0·0	0·1	285	0·00
23	..	29·842	78·5	56·7	66·1	51·9	112·1	45·6	..	66·3	14·2	23·5	3·6	+ 4·6	WSW	SW	0·6	0·0	0·0	236	0·00
24	..	29·736	78·8	54·8	64·c	54·4	107·3	54·0	66·6	65·4	9·6	23·6	0·2	+ 2·4	SW	SW	2·c	0·0	c·2	286	0·00
25	Last Qr.	29·597	71·2	51·8	59·3	53·9	94·6	50·8	66·6	64·4	5·4	16·2	0·0	— 2·5	SW	SW	2·0	0·0	0·1	318	0·01
26	..	29·715	76·0	55·2	64·0	49·6	110·0	48·0	65·8	63·4	14·4	24·8	1·0	+ 1·9	WSW : NW	NW : N	1·0	0·0	0·0	130	0·00
27	..	29·790	79·4	47·7	62·9	50·2	117·6	39·8	67·6	65·4	12·7	26·2	0·0	+ 0·6	NE : WSW	SW : SSW	0·0	0·0	0·0	209	0·00
28	..	29·696	76·0	53·1	63·2	52·7	85·7	45·4	67·4	65·2	10·5	21·8	2·8	+ 0·7	SSW	SW	1·6	0·0	0·1	261	0·00
29	Greatest Declination N.	29·922	82·2	53·6	65·7	51·4	122·6	42·9	67·1	64·9	14·3	31·6	0·2	+ 3·2	WSW	W : WSW	0·0	0·0	0·0	203	0·00
30	..	30·020	81·3	53·2	66·2	59·6	109·7	44·3	67·1	65·4	6·6	20·0	0·6	+ 3·7	SW	SW	1·7	0·0	0·1	265	0·00
31	..	29·980	82·4	57·7	66·8	57·4	110·0	57·7	67·6	65·4	9·4	25·5	1·3	+ 4·3	SW	SW	4·2	0·0	0·6	364	0·00
Means	..	29·856	75·3	51·2	61·8	51·6	103·7	45·2	67·0	63·1	10·2	22·1	1·3	0·0	...	...	..	..	..	Sum 6743	Sum 0·27

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute minimum in the month was 29in·471 on the 2nd.

The first maximum in the month was 30in.015 on the 6th; the second minimum ,, was 29in·896 on the 9th.
The second maximum ,, was 29in.976 on the 12th; the third minimum ,, was 29in·866 on the 13th.
The third maximum ,, was 30in·005 on the 16th; the fourth minimum ,, was 29in·705 on the 21st.
The fourth maximum ,, was 29in·854 on the 23rd; the fifth minimum ,, was 29in·520 on the 25th.
The fifth maximum ,, was 29in·817 on the 27th; the sixth minimum ,, was 29in·689 on the 28th.
The absolute maximum ,, was 30in·056 on the 31st.
The range in the month was 0in·585.
The mean for the month was 29in·856, being 0in·055 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 85°·6 on the 20th; the lowest was 45°·8 on the 8th and 15th.
The range ,, was 39°·8.
The mean ,, of all the highest daily readings was 75°·3, being 1°·7 *higher* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 51°·2, being 1°·7 *lower* than the average of the preceding 23 years.
The mean daily range was 24°·1, being 3°·4 *greater* than the average of the preceding 23 years.
The mean for the month was 61°·8 being 0°·2 *higher* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		LOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
July 1	0	0	8, cu, ci.-cu, ci.-s	6, cu, ci.-cu, ci.-s : 4, ci.-cu, ci, ci.-s
2	0	0	6, ci, ci.-cu, ci.-s	7, ci.-cu, ci, cu.-s : 10, ci.-s, r
3	s N. sp, g-cur	0	10, r : 10, ci.-s, cu.-s, shs.-r, t	8, ci.-cu, ci, ci.-s, cu.-s, shs.-r : 10, ci.-s, cu.-s, sc
4			4, cu, ci.-cu	5, ci.-cu, ci, cu : 8, ci, ci.-cu, cu: 10, m
5			2, ci.-cu, h	0 : 2, ci, cu, ci.-cu: 1, ci
6			4, ci, ci.-cu, cu	10, ci.-cu, ci.-s : 5, ci.-cu, cu : 10, ci.-s
7			10, li.-cl, h	10, ci.-s, ci.-cu : 4, ci.-cu, ci
8	0	0 : w	8, ci.-s, ci.-cu	10 : 10, ci.-s, ci.-cu
9	w	0 : w	10, ci.-cu, ci.-s	9, ci.-cu, cu, ci.-s: 10 : 10, ci.-s
10	0	0	10, ci.-s, sl.-r : 10, ci.-s, ci.-cu	5, ci.-cu, cu : 3, ci
11	0	0 : w	4, ci, ci.-cu	3, ci, ci.-cu : 0 : 2, ci, ci.-s
12	0	0 : w	10	5, ci, ci.-cu : 3, ci, ci.-cu : 6, ci, ci.-s
13	w	w : 0	10, ci.-s	10, ci.-s : 7, ci.-cu, ci, cu: 0
14	0	0	10, ci.-s	0 : 0
15			0, h	0 : 3, ci, h : 4, ci, ci.-s, h
16			10, ci.-s	0, h : 0
17			0, h, sl.-f	3, ci : 10, ci.-s, cu.-s
18			6, ci, h	10, ci, ci.-s : 10 : 0
19			10, h	9, ci, ci.-cu, ci.-s: 10, ci.-cu, ci.-s: 0, h
20			4, ci, h	4, ci, h : 4, ci, ci.-cu, h: 0
21			7, ci, ci.-cu, cu	0, h : 1, ci, ci.-cu : 10, ci.-s, li.-shs
22			8, ci, ci.-cu, cu, cu.-s	10, ci.-s : 10, sl.-r
23	0	0	10, ci.-s	10, cu, ci.-s, cu.-s: 4, ci, ci.-cu, h: 2, ci
24	0	0	10, ci.-s, cu.-s	8, ci, ci.-cu, cu.-s, h : 10, ci.-s, ci, ci.-cu
25	0	0	10, h.-r, ci.-s	10, ci.-s, ci : 10, sl.-r
26	0	0 : w	10, ci,-s	8, ci.-cu, ci.-s : 6, ci.-cu, cu : 8, ci.-cu, cu.-s
27	0	0	4, ci, ci.-cu, cu : 10	10, ci, ci.-s : 5, ci, ci.-cu, cu, cu.-s: 10
28	0	0	4, ci, ci.-cu, ci.-s	10, ci.-s, cu.-s : 10
29	0	0	3, li.-cl, h	4, ci, ci.-cu, h : 3, ci, ci.-cu, ci.-s: 0, ms
30	0	0	0 : 7, ci.-cu, ci.-s	10, ci.-s : 9, ci.-cu, ci.-s, ci : 10
31	0	0	10, ci.-s	3, ci, h : 10, ci.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 62°·7 on the 30th; and the lowest was 42°·3 on the 1st.

The mean ,, was 51°·6, being 2°·1 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·382, being 0^{in}·032 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{gr}·2, being 0^{gr}·4 *less* than the average of the preceding 23 years.

Degree of Humidity. The mean for the month was 70 (that of Saturation being represented by 100), being 6 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 529 grains, being 1 grain *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·4.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·4.

WIND.

The proportions were N. 7, S. 6, W. 10, E. 5, and Calm 3. The greatest pressure in the month was 4^{lbs}·2 on the square foot on the 31st.

RAIN.

Fell on 3 days in the month, amounting to 0^{in}·27, as measured in the simple cylinder gauge partly sunk below the ground; being 2^{in}·37 *less* than the average fall of the preceding 49 years.

ELECTRICITY.—The insulating lamp was not burning from July 4 to 7, and July 15 to 22.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	In the Water of the Thermometer at Greenwich, by Six Self-Registering Thermometers, read every 4th A.M. Highest.	In the Water of the Thermometer at Greenwich, by Six Self-Registering Thermometers, read every 4th A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature (corrected) of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 6 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Aug. 1	..	29·890	75·2	54·5	64·1	48·5	103·3	..	66·6	64·4	15·6	23·8	4·0	+ 1·6	WSW	WSW	3·0	0·0	0·2	254	0·00
2	New	29·964	71·0	48·7	59·7	45·1	103·5	37·0	66·6	65·4	14·6	23·8	0·9	— 2·6	WSW : WNW	NW	0·0	0·0	0·0	147	0·00
3	..	29·948	75·2	43·4	58·7	45·8	110·3	34·9	67·1	64·4	12·9	27·0	2·4	— 3·5	W : WSW	WSW	0·0	0·0	0·0	164	0·00
4	Apogee	29·902	82·3	52·8	67·3	48·6	114·5	48·3	67·1	64·9	18·7	35·2	5·0	+ 5·2	WSW	SW	0·0	0·0	0·0	196	0·00
5	In Equator	29·964	88·6	56·6	71·6	53·8	125·1	40·9	67·6	65·4	17·8	32·0	1·3	+ 9·6	SW	SW	0·0	0·0	0·0	185	0·00
6	..	29·906	82·1	54·0	66·9	52·6	121·0	53·0	68·1	65·9	14·3	26·2	6·6	+ 4·9	WSW	WSW : N	0·0	0·0	0·0	147	0·00
7	..	29·818	81·2	48·7	64·0	48·3	111·0	..	67·5	64·5	15·7	29·6	3·2	+ 2·0	N : SW	WSW	1·0	0·0	0·0	311	0·00
8	..	29·723	82·4	60·7	69·2	57·0	113·2	54·2	66·6	65·4	12·2	24·1	1·4	+ 7·2	WSW	WSW	1·5	0·0	0·2	219	0·00
9	..	29·685	67·7	54·4	58·3	56·0	78·8	..	66·2	64·6	2·3	8·0	0·5	— 3·6	Variable	SW : W	2·5	0·0	0·2	298	0·50
10	First Qr.	29·921	67·0	47·0	55·8	41·3	83·0	..	64·6	62·9	14·5	25·2	4·4	— 6·0	W : WNW	NW : W	2·4	0·0	0·3	309	0·00
11	..	30·176	69·0	46·9	57·0	41·1	111·0	..	64·7	62·9	16·5	27·9	3·4	— 4·1	NW : NNW	NNW : E	0·0	0·0	0·0	144	0·00
12	..	30·181	76·2	42·2	60·1	46·1	98·7	32·6	64·7	62·9	14·0	27·7	0·0	— 1·5	SE : SW	Variable	0·0	0·0	0·0	124	0·00
13	Greatest Declination S	30·202	79·0	47·5	63·1	49·4	106·5	38·7	64·6	62·4	13·7	27·2	0·0	+ 1·6	SW	NE : ESE	0·0	0·0	0·0	107	0·00
14	..	30·274	78·0	50·0	63·0	54·2	116·6	..	65·6	63·4	8·8	20·9	0·0	+ 1·5	SE : NE	E	0·0	0·0	0·0	140	0·00
15	..	30·289	78·1	49·9	63·7	51·7	113·2	42·1	65·8	63·7	12·0	25·5	0·0	+ 2·3	Calm : N	N	1·5	0·0	0·0	199	0·00
16	..	30·072	75·8	44·7	56·7	50·1	97·0	43·6	65·6	63·4	3·6	15·1	0·0	— 1·7	N	N : SW	0·0	0·0	0·0	166	0·00
17	Full : Perigee	29·936	72·0	54·1	60·8	45·6	98·0	48·1	65·5	63·4	15·2	22·9	7·2	— 0·5	N : NE	NNE : ESE	0·0	0·0	0·0	139	0·00
18	..	29·787	70·5	42·3	56·9	42·0	118·7	32·4	64·6	62·6	13·9	24·8	0·0	— 5·2	NE	N	0·0	0·0	0·0	102	0·00
19	In Equator	29·547	70·6	43·4	57·4	42·3	94·0	34·5	64·6	62·6	15·1	25·9	0·9	— 3·5	Calm	NE : E	0·0	0·0	0·0	130	0·00
20	..	29·647	67·0	51·7	56·7	45·7	97·4	48·0	64·4	62·4	11·0	20·5	6·6	— 4·1	NNW	NNW : SSW	0·0	0·0	0·0	114	0·00
21	..	29·739	68·4	44·7	53·4	47·8	97·4	31·5	64·6	62·9	5·6	19·4	0·2	— 7·2	S	NW : N	0·0	0·0	0·0	124	0·12
22	..	29·775	65·2	41·4	53·5	45·4	90·3	30·9	65·0	63·4	8·1	16·0	0·0	— 6·9	N : NE	NE	1·0	0·0	0·0	299	0·00
23	..	29·587	56·2	47·7	49·7	45·6	56·2	47·0	64·6	62·4	4·5	10·8	1·3	—10·8	N	NNW	3·0	0·0	0·2	325	0·53
24	Last Qr.	29·910	62·4	43·7	52·4	40·4	84·6	34·5	62·6	60·2	12·0	21·9	0·7	— 7·9	NW	NW	0·0	0·0	0·0	167	0·00
25	Greatest Declination N	30·044	61·2	38·4	50·6	42·5	81·8	27·2	62·8	60·4	8·1	16·9	0·0	— 9·6	SW	Variable	0·0	0·0	0·0	99	0·00
26	..	30·146	67·2	42·0	53·0	40·9	85·5	31·2	62·7	60·4	12·1	22·9	0·7	— 6·9	N	N	0·0	0·0	0·0	154	0·00
27	..	30·168	66·2	38·1	53·0	40·3	103·5	29·3	61·6	59·4	9·5	22·9	0·0	— 6·7	Calm	SW	0·0	0·0	0·0	183	0·00
28	..	29·980	70·1	51·0	58·3	48·0	94·4	44·1	61·6	59·4	10·3	20·5	2·5	— 1·3	SSW : SW	SW	1·0	0·0	0·0	272	0·02
29	..	29·899	78·4	50·7	65·2	50·0	104·3	52·3	61·1	58·9	15·2	26·2	6·6	+ 5·8	SW	SW : S	0·0	0·0	0·0	191	0·00
30	..	29·736	81·0	47·9	65·3	52·1	106·0	..	61·6	59·4	13·2	30·3	0·6	+ 6·2	SSE	SSW	2·0	0·0	0·1	365	0·00
31	Apogee	29·693	69·8	53·5	59·3	56·0	69·8	51·0	62·6	61·4	3·3	8·0	1·8	+ 0·3	SSW	WSW : SW	4·0	0·0	0·3	279	0·14
Means	..	29·918	72·8	48·5	59·6	47·8	100·1	40·3	64·8	62·8	11·8	22·8	2·0	— 1·5	...	...	..	..	..	Sum 6053	Sum 1·31

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month	was 29in·981 on the 3rd;	The first minimum in the month	was 29in·875 on the 1st.
The second maximum ,,	was 30in·011 on the 5th;	the second minimum ,,	was 29in·894 on the 4th.
The absolute maximum ,,	was 30in·292 on the 14th;	the third minimum ,,	was 29in·625 on the 9th.
The fourth maximum ,,	was 29in·838 on the 22nd;	the absolute minimum ,,	was 29in·506 on the 19th.
The fifth maximum ,,	was 30in·206 on the 27th;	the fifth minimum ,,	was 29in·555 on the 23rd.
		the sixth minimum ,,	was 29in·634 on the 31st.

The range in the month was 0in·798.

The mean for the month was 29in·918, being 0in·129 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 88°·6 on the 5th; the lowest was 38°·1 on the 27th.

The range ,, was 50°·5.

The mean ,, of all the highest daily readings was 72°·8, being *the same as* the average of the preceding 23 years.

The mean ,, of all the lowest daily readings was 48°·5, being 4°·8 *lower* than the average of the preceding 23 years.

The mean daily range was 24°·3, being 4°·8 *greater* than the average of the preceding 23 years.

The mean for the month was 59°·6, being 1°·8 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Aug. 1	o	w : o : w	7, ci, ci.-cu, ci.-s, h	8, ci.-cu, cu : 6, ci.-cu, ci : 9, ci.-cu, cu.-s
2	o	o	7, ci, ci.-cu, ci.-s	9, ci, ci.-cu, ci.-s, cu.-s : 8, ci.-s, ci.-cu, ms
3	o	o	4, li.-cl, h	3, ci, h : 9, ci, ci.-s
4	o	w : o : w	1, ci.	4, ci : 3, ci, ms
5	o	o	o : o	o : 3, ci : 10, ci.-s
6	o	o	10, ci.-s, sl.-f	10, ci.-s : 4, ci, ci.-cu : o
7	o	o : w	o, m : 1, ci, h	7, ci.-cu : 3, ci.-cu, ci.-s
8	o	o	10	10, ci.-s : 4, ci, ci.-cu : 4, ci, ci.-s, ms
9	m	w : m N : o	10, h-r	10, sc, h.-r : 5, ci.-s, ms
10	w	o	5, ci.-cu, cu	9, ci.-cu, ci.-s : 1, ci.-s, ms
11	o	o	4, cu, ci, ci.-cu, ci.-s	4, cu, ci, ci.-cu, ci.-s : 1, ci, ci.-cu : o, ms
12	o	o	2, ci	7, ci, ci.-cu, h : 3, ci : o, ms
13	o	o : m	3, ci, h	5, ci, ci.-cu : 1, ci.-s, ci, ms
14			5, ci, ci.-cu	2, li.-cl : 2, li.-cl
15			7, ci	o : o : 10, v
16	o	o	10, sl.-r	10 : 7, ci.-cu, h : o, h
17	o	o	6, ci, ci.-cu	3, ci.-cu, ci, ci.-s, h : 1, ci, h
18	o	o : w	2, ci, ci.-cu	2, ci, ci.-cu : 9, ci.-s, ci, ci.-cu : 2, ci
19	w	w : o : w	1, ci, h	7, ci, ci.-cu, cu.-s : 10
20	o		5, ci, ci.-cu	8, ci.-cu, ci.-s : 10, ci.-s : 6, ci.-cu, ci.-s
21	s	sP, sN, sp, g-cur : o	10 : 10, ci.-s, t, h.-r, hl	9, t, r : v : o
22	w	w : o	4, ci, ci.-cu, ci.-s	10, ci.-s, cu.-s : 10, sl.-r
23	m N	o	10, h-r : 10, c.-h-r	10, c-r : 10, ci.-s : 3, s, ci.-s
24	w	w : o	4, ci, ci.-cu, cu	8, ci, ci.-cu, ci.-s : 2, ci, sl.-f
25	o	o	3, ci, h	7, ci, ci.-s, cu.-s, h : 10, ci.-s : o, l
26	w	o	o	6, cu, ci.-cu : o
27	w	w : o	o : 1, ci, h	1, ci : 5, ci, h : 2, ci, ci.-s
28	o	w	10, ci.-s, cu.-s	10, r : 10, oc.-li.-shs
29	w	o	7, ci.-cu	9, ci.-cu, ci : 5, ci : o
30	o	o	1, ci	o : 10, th-r
31	o	w : o	10, th.-r : 10, h.-r	10, h-r : v : c, ms

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 64°·3 on the 9th ; and the lowest was 37°·8 on the 24th.

The mean ,, was 47°·8, being 6°·3 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·333, being 0^{in}·089 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·7, being 1^{gr}·0 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 65 (that of Saturation being represented by 100), being 12 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 533 grains, being 5 grains *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by o and a cloudy sky by 10, was 5·3.

OZONE.

The mean amount for the month, on a scale ranging from o to 10, was 0·9.

WIND.

The proportions were N. 7, S. 4, W. 10, E. 2 and Calm 8. The greatest pressure in the month was 4^{lb}·0 on the square foot on the 31st.

RAIN.

Fell on 5 days in the month, amounting to 1^{in}·31, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·08 *less* than the average fall of the preceding 49 years.

ELECTRICITY.—The insulating lamp was not burning on August 14 and 15.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with Bulb-Vessel in Vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Sept. 1	New	29·892	70·3	47·4	57·2	45·5	105·0	37·2	62·7	61·5	11·7	23·2	0·0	— 1·6	SW	SW	2·0	0·0	0·0	308	0·00
2	In Equator	29·677	67·0	49·3	57·4	54·5	89·2	37·2	62·6	61·4	2·9	10·6	0·0	— 1·2	SW	SW	1·3	0·0	0·1	256	0·05
3	..	29·546	74·6	51·4	59·6	52·6	96·5	43·4	62·8	61·6	7·0	18·9	0·0	+ 1·1	SW	SW	1·0	0·0	0·0	212	0·11
4	..	29·725	68·7	51·7	58·5	47·3	87·2	47·0	62·6	60·4	11·2	17·3	4·2	+ 0·1	WSW : NW	NW : WNW	0·0	0·0	0·0	293	0·02
5	..	29·840	67·2	53·3	57·9	43·9	93·3	..	62·1	59·9	14·0	19·8	6·4	— 0·3	WNW	WSW	2·6	0·0	0·3	281	0·09
6	..	29·804	74·0	48·4	59·8	57·3	102·8	37·1	61·6	59·4	2·5	10·8	0·0	+ 1·8	SW	SW	5·0	0·0	0·6	391	0·25
7	..	29·836	70·6	62·2	65·0	59·6	79·8	62·0	62·6	59·9	5·4	9·0	2·9	+ 7·2	WSW	SW	0·6	0·0	0·0	314	0·00
8	..	29·852	75·5	61·5	66·8	60·5	81·0	60·2	63·1	60·4	6·3	11·7	2·1	+ 9·1	SW	SW	1·6	0·0	0·1	385	0·03
9	First Quarter: Greatest Dec. S.	29·771	70·0	58·9	63·1	56·1	88·0	56·0	63·1	60·9	7·0	10·8	3·2	+ 5·5	SW	SW : WSW	5·0	0·0	0·9	293	0·00
10	..	29·804	62·3	51·5	56·3	48·5	73·4	48·6	63·8	61·6	7·8	12·2	1·8	— 1·2	SW	SW	0·0	0·0	0·0	217	0·00
11	..	29·710	64·0	44·0	52·2	40·9	94·4	42·0	62·9	60·6	11·3	19·4	0·6	— 5·2	SW : W	WNW : WSW	0·6	0·0	0·0	240	0·02
12	..	29·874	67·2	40·9	53·4	42·4	83·3	31·1	61·6	60·4	11·0	23·4	0·5	— 3·9	WSW : W	W	0·0	0·0	0·0	178	0·00
13	..	29·774	63·5	44·4	54·0	49·4	81·3	29·0	61·1	58·9	4·6	11·0	1·6	— 3·2	SW : SSW	SSW : SW	0·6	0·0	0·0	265	0·00
14	..	29·458	62·6	51·7	57·8	53·1	86·0	48·5	61·1	58·9	4·7	8·5	0·6	+ 0·8	SSW	SSW : SW	4·5	0·0	0·7	279	0·21
15	Perigee: In Equator: Full.	29·459	66·0	46·4	56·1	49·1	84·0	40·2	60·6	58·4	7·0	15·0	0·2	— 0·6	SW	SSW : SSE	1·5	0·0	0·0	251	0·18
16	..	29·212	62·2	53·2	56·3	50·5	84·0	47·6	59·8	57·6	5·8	10·0	2·6	— 0·2	S : SSW	SSW	2·7	0·0	0·2	215	0·26
17	..	29·379	65·4	45·9	54·2	47·4	89·5	42·3	60·1	57·9	6·8	15·6	0·0	— 2·1	SSW : SW	SW : S	2·2	0·0	0·2	277	0·57
18	..	29·538	65·4	47·9	54·9	46·4	84·2	43·8	60·1	57·9	8·5	13·7	1·7	— 1·1	SW	SW	1·0	0·0	0·0	234	0·35
19	..	29·611	64·6	45·7	53·2	46·4	93·0	41·0	60·6	58·4	6·3	15·2	0·4	— 2·7	SW : WSW	WSW	0·0	0·0	0·0	178	0·00
20	..	29·734	65·8	42·1	53·2	47·2	92·3	32·8	60·8	58·6	6·0	14·8	0·0	— 2·4	SW	SW : SSW	0·5	0·0	0·0	240	0·00
21	..	29·642	68·2	53·1	58·8	49·2	91·2	52·2	60·6	58·4	9·6	16·6	1·8	+ 3·3	S : WSW	SW : S	1·0	0·0	0·1	203	0·06
22	Greatest Dec. N. Last Quarter	29·660	68·3	52·9	58·7	51·0	99·0	50·5	60·9	58·9	7·7	15·5	1·4	+ 3·3	SSE : SW	SW	1·7	0·0	0·1	277	0·52
23	..	29·909	66·8	47·6	56·1	48·3	98·0	40·0	61·5	59·3	7·8	16·0	0·4	+ 0·8	WSW	SW	0·5	0·0	0·0	323	0·01
24	..	30·017	68·8	50·2	57·4	49·8	102·0	48·7	61·6	59·4	7·6	16·2	0·4	+ 2·4	SW	WSW : NW	3·0	0·0	0·2	159	0·03
25	..	30·196	68·8	43·6	55·9	52·0	108·7	35·7	61·6	59·4	3·9	12·6	0·0	+ 1·0	SW	SW : S	0·0	0·0	0·0	80	0·00
26	..	30·208	68·3	47·4	55·6	52·1	86·0	46·0	61·8	59·6	3·5	10·6	0·0	+ 0·9	Calm	SSW : SSE	0·0	0·0	0·0	86	0·00
27	..	30·130	66·2	46·3	55·7	48·9	83·4	38·8	61·7	59·5	6·8	16·3	0·0	+ 1·2	SE	E	0·0	0·0	0·0	177	0·00
28	Apogee	30·086	68·7	42·6	54·9	48·3	105·1	35·4	62·6	60·2	6·6	17·8	0·0	+ 0·6	ESE	E : Calm	0·0	0·0	0·0	90	0·00
29	In Equator	29·984	65·7	42·0	53·5	48·1	101·6	35·5	61·6	59·4	5·4	16·3	0·0	— 0·5	W	NNW	0·0	0·0	0·0	157	0·00
30	New	29·990	62·7	50·0	53·7	44·5	75·4	32·9	60·6	58·4	9·2	16·2	2·0	— 0·1	NNW : NNE	NNE	0·0	0·0	0·0	126	0·00
Means	..	29·777	67·3	49·1	56·9	49·7	90·7	42·9	61·7	59·6	7·2	14·8	1·2	+ 0·4	...	...	..	..	..	Sum 6985	Sum 2·76

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·942 on the 1st; the first minimum in the month was 29in·525 on the 3rd.
The second maximum ,, was 29in·919 on the 5th; the second minimum ,, was 29in·758 on the 6th.
The third maximum ,, was 29in·870 on the 8th; the third minimum ,, was 29in·727 on the 9th.
The fourth maximum ,, was 29in·878 on the 10th; the fourth minimum ,, was 29in·668 on the 11th.
The fifth maximum ,, was 29in·891 on the 12th; the fifth minimum ,, was 29in·392 on the 14th.
The sixth maximum ,, was 29in·501 on the 15th; the absolute minimum ,, was 29in·211 on the 16th.
The seventh maximum ,, was 29in·769 on the 20th; the seventh minimum ,, was 29in·627 on the 21st.
The absolute maximum ,, was 30in·242 on the 26th.
The range in the month was 1·in031.
The mean for the month was 29in·777, being 0in·042 *lower* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 75°·5 on the 8th; the lowest was 40°·9 on the 12th.
The range ,, was 34°·6.
The mean ,, of all the highest daily readings was 67°·3, being *the same as* the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 49°·1, being 0°·3 *higher* than the average of the preceding 23 years.
The mean daily range was 18°·2, being 0°·3 *less* than the average of the preceding 23 years.
The mean for the month was 56°·9, being *the same as* the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Sept. 1	o	o : w : o	o : 2, ci, ci.-cu	6, ci, ci.-cu, sl.-r : o
2	o	w : o : w	10, ci.-s, sl-r	10, ci.-s, oc.-shs : o, m
3	w	m N : o : w N	1, ci, ci.-cu : li.-cl, t	10, ci.-s, cu.-s, oc.-r : 10, h.-r
4	o	o	7, ci, ci.-cu	8. ci.-cu, ci.-s : 10, sl.-r
5	o	o	10, r : 9, ci, ci.-cu	6, ci.-cu, cu, ci : o. m
6	o	o : w : o	10, ci.-s, r	10, ci.-s, w : w : 10
7	o	o	10, ci.-s, sc	10. ci.-s : 10 : 10, ci.-s
8	o	o	10 : 10, ci.-s	10, ci.-s, cu.-s, oc.-shs : 10
9	o	o	10, th.-r	10, ci.-s, w : 10 : 10, vv
10	o	w : o : w	10, li.-cl, h	10, ci.-s : 1, ci, lu.-ha
11	o	o : w	10, sl.-r : li.-cl : 10,cu.-s,ci.-s,ci.-cu	8, ci.-cu, ci.-s : li.-cl : o
12	w	o	o : o, h, v	7, ci, ci.-cu, ci.-s, cu.-s : 8, ci.-cu, ci.-s
13	w	o : w	9, ci.-cu, ci, ci.-s, sl.-r	10,ci.-s : 10,ci.-cu,ci.-s,cu.-s,sl.-r,vv
14	o	w : o	10, ci.-s, w	10, ci.-s, w : 10, r : 10, r
15	o : w N	o	3, ci, ci.-cu, h.-r	7, ci, ci.-cu, cu.-s, r : 10, ci.-s, cu.-s, v, r
16	o	w	10, r : 10, h.-r, ci.-s, cu.-s	10, s, ci.-s : v : 10, ci.-s
17	o	w : o : w	10, h.-r : 3, ci, ci.-cu	5,ci.-s,cu.-s,ci,ci.-cu,cu : 4, ci.-s, s, v, l, oc.-shs
18	o	s, sp : w	10, h.-r : 3, ci, ci.-cu	9, ci,ci.-cu,cu.-s,oc.-shs : o
19	w	m N : o	li.-cl : 6, ci.-s	10, ci.-s : 2, ci, ci.-cu : o
20	m	o : w	5, li.-cl, h	8, ci,ci.-cu, cu.-s: sl.-r : 10
21	w	o : w	o, ci, h	4, ci, ci.-cu : 8,ci.-cu, ci.-s,ci: 6, ci, ci.-s, v
22			h.-r : 4, ci, ci.-cu, cu, ci.-s	9,ci.-s,ci,ci.-cu,r: o : 9, ci.-s, l
23			o, sl.-r, v	10, ci, ci.-cu, ci.-s: v : o
24			10, ci.-s, r	5, ci, ci.-cu, cu, ci.-s, h: o, h, f
25			4, ci	6, ci, ci.-cu : li.-cl : o
26			10, f, h.-d	6,ci.-cu, ci.-s,ci : o : o
27			f, h.-d : o	o : o
28			th.-f, h.-d : o	o : o, sl.-f
29			o, h, sl.-f	4, ci, h : 6, ci.-s
30			10, v	10, ci, ci.-cu, ci.-s, cu.-s : 10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 62°·5 on the 8th; and the lowest was 39°·3 on the 11th.

The mean ,, was 49°·7, being 1°·2 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·357, being 0^{in}·022 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4^{grs}·0, being 0^{grs}·2 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 77 (that of Saturation being represented by 100), being 4 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 533 grains, being 1 grain *less* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·2.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·3.

WIND.

The proportions were N. 2, S. 12, W. 13, E. 1, and Calm 2. The greatest pressure in the month was 5^{lbs}·0 on the square foot on the 6th and 9th.

RAIN.

Fell on 16 days in the month, amounting to 2^{in}·76, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·33 *greater* than the average fall of the preceding 49 years.

ELECTRICITY.—The moveable part of the electrical apparatus fell from the top of the pole to the ground in consequence of a breakage in its suspension on September 22.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest on the Sun, as shown by a Self-Registering Thermometer, with the Bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Oct. 1	..	29·951	61·8	44·7	52·1	45·5	94·2	38·8	60·6	57·9	6·6	13·9	0·2	— 1·4	NE	E : NE	0·0	0·0	0·0	228	0·00
2	..	30·081	59·7	46·2	51·0	40·5	93·2	45·0	58·6	56·4	10·5	13·7	1·9	— 2·4	NE	E : ENE	3·5	0·0	0·6	340	0·01
3	..	30·141	57·2	44·2	49·8	37·2	92·2	37·0	57·6	55·4	12·6	17·2	7·3	— 3·3	ESE	E : ENE	4·8	0·0	0·9	405	0·00
4	..	29·997	54·2	42·0	47·4	35·9	87·0	35·6	57·1	54·9	11·5	15·2	7·3	— 5·6	ESE	E : ENE	8·0	0·0	1·4	367	0·00
5	..	29·917	57·2	39·1	48·4	38·3	90·2	27·7	56·6	54·4	10·1	18·4	2·5	— 4·4	E	ENE	4·5	0·0	0·6	262	0·00
6	Greatest Declination S.	30·015	59·5	37·5	49·9	42·0	96·0	28·1	56·3	54·1	7·9	17·7	0·0	— 2·6	E	E	2·9	0·0	0·1	237	0·00
7	..	30·083	62·4	42·4	51·2	45·0	93·3	34·0	56·1	53·9	6·2	14·8	0·0	— 1·1	NE	NE	0·4	0·0	0·0	198	0·00
8	First Qr.	30·069	60·7	39·2	50·5	44·6	92·0	28·4	55·1	52·9	5·9	15·4	0·0	— 1·6	NE	E : NE	2·5	0·0	0·1	222	0·00
9	..	30·009	57·2	47·8	50·8	42·3	73·0	37·8	54·6	52·4	8·5	12·5	5·5	— 1·1	NNE	N	0·0	0·0	0·0	205	0·00
10	..	30·090	60·8	46·4	50·8	42·8	97·0	41·4	54·2	52·4	8·0	14·6	5·0	— 0·9	N	N	0·4	0·0	0·0	244	0·00
11	..	30·163	58·3	46·9	50·5	42·2	78·2	45·5	54·1	52·4	8·3	12·4	2·3	— 0·9	NNW	NNW	0·5	0·0	0·0	260	0·00
12	..	30·090	59·2	47·7	52·8	43·9	75·0	37·5	53·8	51·7	8·9	14·1	5·0	+ 1·8	NNW	NW	0·0	0·0	0·0	226	0·00
13	In Equator : Perigee.	29·913	56·2	46·0	50·9	41·8	63·2	34·6	53·9	51·4	9·1	13·6	1·9	+ 0·4	W : NW	NW	1·0	0·0	0·1	189	0·00
14	..	29·886	58·2	45·3	50·9	44·5	62·1	34·2	53·9	51·6	6·4	11·6	0·9	+ 0·8	W	N	0·0	0·0	0·0	138	0·00
15	Full	29·961	56·0	37·7	45·6	38·6	84·2	29·7	53·7	50·8	7·0	15·0	0·0	— 4·2	N	SW	0·0	0·0	0·0	166	0·00
16	..	29·666	59·4	44·3	51·7	43·3	79·0	34·2	51·6	49·4	8·4	14·8	0·0	+ 2·1	SW	SW	1·7	0·0	0·2	368	0·00
17	..	29·507	60·8	48·9	53·8	47·8	79·5	40·7	51·1	48·9	6·0	13·1	2·0	+ 4·4	WSW	WSW	3·5	0·0	0·2	294	0·01
18	..	29·513	62·6	48·3	53·7	47·4	87·1	39·1	51·6	49·4	6·3	12·7	2·1	+ 4·5	SW : WSW	SW : SSW	0·0	0·0	0·0	175	0·00
19	Greatest Declination N.	29·059	67·2	45·1	58·1	50·9	86·0	..	52·6	50·4	7·2	14·4	0·0	+ 9·0	SSE	S	4·0	0·0	0·6	447	0·00
20	..	29·227	64·2	46·0	51·7	39·5	87·8	42·6	52·6	49·6	12·2	18·8	5·9	+ 2·6	S : WSW	SW	9·0	0·0	1·9	327	0·02
21	..	29·283	56·2	42·6	50·3	44·0	66·0	37·4	53·6	51·4	6·3	13·0	2·0	+ 1·4	S : SSE	SE	2·3	0·0	0·1	249	0·00
22	Last Qr.	28·948	59·2	47·9	52·4	48·7	79·6	47·3	53·1	50·9	3·7	7·2	1·9	+ 3·8	SSE	SSE : SSW	3·4	0·0	0·3	360	0·50
23	..	28·996	56·2	46·7	49·9	43·7	75·4	42·2	53·1	50·9	6·2	8·2	1·3	+ 1·6	SW	SW	8·0	0·0	1·0	328	0·11
24	..	29·241	60·0	39·4	48·3	42·0	93·3	32·1	52·1	49·9	6·3	16·1	0·0	+ 0·4	SW	SW : S	0·0	0·0	0·0	82	0·00
25	Apogee	29·315	56·4	37·9	48·8	46·5	78·5	31·9	52·6	50·4	2·3	7·2	0·5	+ 1·3	Calm	ENE	0·0	0·0	0·0	200	0·00
26	In Equator	29·139	55·5	48·3	52·4	51·1	58·7	44·4	52·6	50·4	1·3	3·6	0·6	+ 5·0	E	NE	0·0	0·0	0·0	133	0·00
27	..	29·160	57·2	51·7	53·3	51·6	62·0	51·3	53·4	51·2	1·7	3·8	0·6	+ 6·1	Calm	WSW : SW	0·0	0·0	0·0	155	0·34
28	..	29·362	60·2	44·0	51·4	46·8	90·4	41·7	53·1	50·9	4·6	11·4	0·0	+ 4·4	S	E : ENE	0·0	0·0	0·0	200	0·00
29	..	29·555	53·7	47·3	50·0	47·2	66·8	45·2	53·0	51·4	2·8	4·8	1·5	+ 3·2	NE	NE	1·5	0·0	0·0	255	0·00
30	New	29·837	48·2	38·9	43·0	40·6	50·0	37·0	51·6	49·4	2·4	4·4	1·8	— 3·6	NNE	NNE	0·0	0·0	0·0	164	0·02
31	..	30·031	49·7	38·7	43·9	37·9	79·9	35·2	50·6	48·4	6·0	10·7	0·7	— 2·6	ENE	E : ESE	2·1	0·0	0·2	250	0·00
Means	..	29·684	58·2	44·1	50·5	43·7	80·3	37·9	54·0	51·8	6·8	12·4	2·0	— 0·6	..	...	..	..	..	Sum 7674	Sum 1·06

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first minimum in the month was $29^{in}\cdot938$ on the 1st.
The first maximum in the month was $30^{in}\cdot190$ on the 3rd; the second minimum ,, was $29^{in}\cdot896$ on the 5th.
The absolute maximum ,, was $30^{in}\cdot205$ on the 11th; the third minimum ,, was $29^{in}\cdot875$ on the 14th.
The third maximum ,, was $29^{in}\cdot999$ on the 15th; the absolute minimum ,, was $28^{in}\cdot895$ on the 19th.
The fourth maximum ,, was $29^{in}\cdot398$ on the 20th; the fifth minimum ,, was $28^{in}\cdot905$ on the 22nd.
The fifth maximum ,, was $29^{in}\cdot373$ on the 25th; the sixth minimum ,, was $29^{in}\cdot087$ on the 26th.
The range in the month was $1^{in}\cdot310$.
The mean for the month was $29^{in}\cdot684$, being $0^{in}\cdot012$ *lower* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was $67^{\circ}\cdot2$ on the 19th; the lowest was $37^{\circ}\cdot5$ on the 6th.
The range ,, was $29^{\circ}\cdot7$.
The mean ,, of all the highest daily readings was $58^{\circ}\cdot2$, being $0^{\circ}\cdot5$ *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was $44^{\circ}\cdot1$, being *the same as* the average of the preceding 23 years.
The mean daily range was $14^{\circ}\cdot1$, being $0^{\circ}\cdot5$ *less* than the average of the preceding 23 years.
The mean for the month was $50^{\circ}\cdot5$, being *the same as* the average of the preceding 23 years.

MONTH and DAY. 1864.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Oct. 1			3, ci, ci.-cu, v	10, ci.-s : 0
2			10, sl.-r : 5, ci.-cu, cu	7, cu, ci.-cu, ci, ci.-s : 7, ci.-cu, ci.-s
3			6, cu, ci.-cu, cu.-s	2, ci, ci.-cu, w : 2, ci.-s, v
4			0, ci,st.-w	3, ci, ci.-cu, w : 9, ci.-cu, ci.-s
5			1, ci, ci.-cu, w	0, w : 0
6			0 : 0	0, w : 10 : 10. ci.-s
7			1, ci	0 : 0
8			2, ci	5, ci, ci.-cu, cu : 10, ci.-s : 10, ci.-s, s
9			10 : 10, ci.-s	10 : 10 : 9, v, lu.-co
10			3, ci, v	10, ci.-s : 10
11			10, v	10 : 10
12			10 : 10	10, ci.-s, ci.-cu : 10, ci.-s
13			10 : 10, ci.-s	10 : 10, v : 10
14			10 : 10, gt.-glm	9. cu.-s, ci.-s, ci, ci.-cu : 10, ci.-s, f
15			0	6, cu, ci.-cu, ci.-s : 10, sl.-f, vv
16			9, ci.-cu, ci.-s	9, ci.-cu, ci.-s : 10, ci.-s, cu.-s, ci, sl.-r
17			10, sl.-r	10 : 10. ci.-s, li.-shs
18			6, ci, ci.-cu, ci.-s	10, ci. ci.-cu, cu.-s : 10
19			2, ci	7, ci, ci.-cu, w : 4. ci, ci.-s, v : 10, w. sl.-r
20			10, r, st.-w : 1, ci, li.-cl, w	4, ci, ci.-cu, cu.-s, st.-w : 0
21			10, ci.-s, ci	10, ci.-s : 10, ci.-s : 10, sl.-r
22			10 : 10 h.-r : 9, r, ci.-s, ci	10, cu.-s, li.-shs : 6, ci, ci.-cu, cu.-s, v : r, ci.-s,s,m
23			10, r : 10, st.-w	10. w : v : 0
24			sl.-f : 2, ci.-s, ci	1, li.-cl, ci : 0, m : c, f
25			10, ci.-s	10, ci.-s : 10, ci.-s
26			10 : 10	10 : 10, ci.-s : 10, r
27			10, r : 10, m.-r, gt.-glm	10, ci.-s : 10
28			10, f : li.-cl, v	3, ci : 3, ci : 10, ci.-s
29			10 : 10	10 : 10, sl.-r
30			10, ci.-s, th.-r	10, th.-r : 0
31			10 : 10, ci.-s, w	9, ci, ci.-cu, cu.-s: 5, ci, ci.-cu, cu, v : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·2 on the 27th; and the lowest was 34°·9 on the 4th.

The mean „ was 43°·7, being 2°·7 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·285 being 0^{in}·032 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3^{gr}·3, being 0^{gr}·4 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 78 (that of Saturation being represented by 100), being 0 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 539 grains, being *the same as* the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·8.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·9.

WIND.

The proportions were of N. 7, S. 6, W. 6, E. 9, and Calm 3. The greatest pressure in the month was 9^{lbs}·0 on the square foot on the 20th.

RAIN.

Fell on 7 days in the month, amounting to 1^{in}·06, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·73 *less* than the average fall of the preceding 49 years.

ELECTRICITY.—The Electrical apparatus was not yet restored.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Six Registering Thermometer, with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 23 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Nov. 1	..	30·047	49·2	40·9	44·4	36·1	71·0	34·0	..	..	8·3	10·9	5·1	— 2·0	E	E : NE	4·0	0·0	0·5	268	0·00
2	..	29·995	47·6	39·7	43·5	36·1	63·2	38·4	..	..	7·4	10·7	2·5	— 2·7	NNE	NNE : N	1·7	0·0	0·1	197	0·00
3	Greatest Declination S.	30·138	52·8	34·7	42·7	38·1	83·4	..	..	..	4·6	11·8	0·0	— 3·4	N : Calm	NNE : Calm	0·0	0·0	0·0	119	0·00
4	..	30·283	45·5	30·1	37·0	35·1	45·5	23·2	..	..	1·9	4·8	0·0	— 8·9	Calm	SW	0·0	0·0	0·0	170	0·00
5	..	30·199	53·0	33·9	42·5	38·7	77·0	31·5	..	..	3·8	11·8	1·2	— 3·2	WSW	N	1·4	0·0	0·1	239	0·00
6	First Qr.	30·452	49·0	33·5	40·6	32·3	77·6	25·0	..	..	8·3	16·0	0·6	— 4·9	N	NE	2·0	0·0	0·1	160	0·00
7	..	30·243	43·1	30·6	36·3	30·7	70·0	26·2	..	..	5·6	9·5	0·4	— 8·8	NE	Variable	0·0	0·0	0·0	111	0·00
8	..	29·960	44·8	28·9	36·9	34·1	45·0	23·4	..	..	2·8	4·8	0·0	— 7·9	SW	W : N	0·0	0·0	0·0	145	0·00
9	In Equator	29·995	48·4	32·4	39·9	34·1	74·0	30·4	..	..	5·8	11·6	0·6	— 4·6	N	NE : E	0·0	0·0	0·0	129	0·00
10	Perigee	29·878	44·6	25·9	34·9	28·7	75·0	18·0	..	..	6·2	13·2	0·0	— 9·4	Calm	ENE	2·0	0·0	0·1	140	0·00
11	..	29·762	41·2	28·4	35·9	30·9	48·0	19·8	..	..	5·0	7·8	0·0	— 8·1	Calm	Calm	0·0	0·0	0·0	65	0·00
12	..	29·646	42·5	31·6	37·9	34·7	45·6	25·9	..	..	3·2	5·9	0·0	— 6·0	Calm	Calm : SE	0·0	0·0	0·0	125	0·00
13	Full	29·001	50·0	36·2	44·6	43·5	50·0	33·1	..	..	1·1	3·6	0·0	+ 1·1	SSE	SSE	3·0	0·0	0·1	303	0·11
14	..	28·617	53·0	40·7	46·2	40·3	78·8	39·2	..	..	5·9	10·4	0·0	+ 2·9	SW	SW : S	1·6	0·0	0·1	272	0·36
15	Greatest Declination N.	28·673	50·7	35·3	43·7	42·6	69·6	33·7	43·9	41·2	1·1	3·8	0·0	+ 0·7	SE	E : N	0·0	0·0	0·0	175	0·09
16	..	29·210	47·1	40·9	43·7	41·0	49·2	36·2	45·4	43·2	2·7	5·0	0·2	+ 1·1	N : NW	NW : WSW	0·0	0·0	0·0	180	0·00
17	..	29·136	54·3	35·2	45·7	44·4	54·3	31·1	45·5	44·1	1·3	3·8	0·0	+ 3·3	SSE	S : SSW	..	..	..	526	0·28
18	..	29·272	53·7	40·8	47·4	38·7	74·6	31·2	45·1	43·7	8·7	12·2	3·9	+ 5·2	SW	WSW	8·0	0·0	1·7	405	0·03
19	..	29·656	53·9	37·9	46·9	44·0	77·5	29·2	45·1	44·0	2·9	5·6	1·5	+ 4·7	SW	S : SSE	0·0	0·0	0·0	228	0·00
20	..	29·448	52·4	43·0	47·4	44·8	53·3	38·6	45·1	44·7	2·6	5·2	0·0	+ 5·2	SE	SSE	0·0	0·0	0·0	129	0·00
21	Last Qr.	29·693	51·5	35·0	43·5	43·1	68·5	29·2	45·3	44·7	0·4	2·7	0·0	+ 1·5	S	SSW	0·2	0·0	0·0	234	0·05
22	Apogee	29·400	52·5	38·7	44·9	42·1	70·0	29·7	45·7	45·2	2·8	5·7	0·8	+ 3·2	SW	SW	3·7	0·0	0·3	366	0·19
23	In Equator	29·440	46·7	37·3	42·2	39·4	58·7	30·2	45·9	44·7	2·8	5·0	0·6	+ 0·8	SW : S	S : SE : E	0·0	0·0	0·0	268	0·18
24	..	29·097	41·3	35·9	38·3	35·1	56·0	35·9	46·1	44·9	3·2	4·4	0·8	— 2·7	NE : NW	WSW : SSW	1·7	0·0	0·2	238	0·86
25	..	29·106	44·5	31·4	38·5	35·3	68·0	24·6	..	..	3·2	8·1	0·0	— 2·3	SW	SSW : SSE	5·0	0·0	0·4	354	0·04
26	..	28·945	45·5	34·0	39·6	34·7	65·6	31·1	44·9	42·9	4·9	8·6	0·0	— 1·3	WSW	WSW	2·1	0·0	0·1	362	0·11
27	..	29·646	46·6	35·1	42·2	37·3	69·7	29·0	44·8	43·8	4·9	8·1	1·8	+ 1·1	WSW	WSW : SSW	1·8	0·0	0·0	354	0·00
28	..	29·626	54·4	42·7	48·8	46·6	60·3	41·6	..	..	2·2	5·4	1·0	+ 7·3	SSW	SW	7·0	0·0	0·9	409	0·03
29	New Greatest Declination S.	30·204	47·5	35·9	41·3	36·9	72·5	27·7	..	..	4·4	7·8	0·5	— 0·3	SW	SW : SSW	0·0	0·0	0·0	307	0·00
30		30·001	48·4	37·7	43·9	38·5	54·2	34·4	..	..	5·4	8·4	1·3	+ 2·3	SSW	SSW	4·1	0·0	0·9	364	0·24
Means	..	29·626	48·5	35·5	42·0	37·9	64·2	30·4	45·2	43·9	4·1	7·8	0·8	— 1·2	...	...	..	..	..	Sum 7342	Sum 2·57

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·317 on the 4th; the first minimum in the month was 30in·156 on the 5th.
The absolute maximum ,, was 30in·492 on the 6th; the absolute minimum ,, was 28in·610 on the 14th.
The third maximum ,, was 29in·328 on the 16th; the third minimum ,, was 29in·021 on the 17th.
The fourth maximum ,, was 29in·715 on the 19th; the fourth minimum ,, was 29in·429 on the 20th.
The fifth maximum ,, was 29in·715 on the 21st; the fifth minimum ,, was 29in·346 on the 22nd.
The sixth maximum ,, was 29in·530 on the 23rd; the sixth minimum ,, was 29in·069 on the 24th.
The seventh maximum ,, was 29in·267 on the 25th; the seventh minimum ,, was 28in·811 on the 25th.
The eighth maximum ,, was 29in·712 on the 27th; the eighth minimum ,, was 29in·552 on the 28th.
The ninth maximum ,, was 30in·227 on the 29th; the ninth minimum ,, was 29in·929 on the 30th.
The range in the month was 1in·882.
The mean for the month was 29in·626, being 0in·128 *lower* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 54°·4 on the 28th; the lowest was 25°·9 on the 10th; and the range in the month was 28°·5.
The mean ,, of all the highest daily readings was 48°·5, being 0°·6 *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 35°·5, being 2°·0 *lower* than the average of the preceding 23 years.
The mean daily range was 13°·0, being 1°·4 *greater* than the average of the preceding 23 years.
The mean for the month was 42°·0, being 2°·1 *lower* than the average of the preceding 23 years.

OSLER'S ANEMOMETER. On the 17th the pressure pencil was out of order; and on the 18th the numbers inserted in the pressure columns refer only to the 15 hours between 9h a.m. and midnight.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Nov. 1			7, ci.-cu, ci, w	9, ci.-s, cu.-s, w : 10 : 10, ci.-s
2			10, ci.-cu, ci.-s, v	9, ci, ci.-cu, ci.-s : 10
3			f, h.-d : 1, ci	6, ci, ci.-cu, cu, cu.-s, ci.-s, v: 0, f
4			0, f, h.-fr, glm	10, h, f : 5, ci, ci.-cu, th.-f: 0, f
5			10, sl.-f, m.-r : 10, th.-f	8, ci, ci.-cu, ci.-s, v : 0
6			0, h, h.-fr	1, ci, ci.-cu : 1, ci, ci.-s, vv
7			10, ci.-s	9, ci.-s, ci : 10, th.-cl, f
8			10, f, h.-fr.	10, th.-f : sl.-r : 0
9			sl.-f, h.-fr. : 3, ci, v, sl.-r	10, ci.-s : 1, ci, m
10			0, th.-f, h.-fr	0, ci : 0, h.-fr
11			10, th.-f	10 : 10
12			10, sl.-f	10, ci.-s : 10
13			10, r : 10, ci.-s, sc, th.-r, w	10, sc, m.-r : 10, sc, r
14			10, h.-r : 1, li.-cl	4, ci, ci.-cu : 10, sl.-r : 5, ci.-s, v
15			4, ci, ci.-s, th.-f	10, ci.-s : 10, r : 10, sl.-r, sc
16			10, sc, gt.-glm	10, ci.-s, sl.-r : 10 : 10, ci.-s
17			10, h.-r	10, th.-r : 10, h.-shs : 5, ci.-cu, ci.-s, cu.-s, v
18			10, r, st.-w : 5, ci, ci.-s, st.-w	8, ci, ci.-cu, ci.-s, cu.-s, sl.-r: 0
19			0 : 2, ci, ci.-s : 6, v	10, ci, ci.-s : 10 : 5, li.-cl, h
20			10, ci-s	10, th.-r : 10
21			5, li.-cl, th.-f	7, ci, ci.-s, sl.-f : 3, ci, v : 10, r
22			10, oc.-h.-shs	9, ci.-s, ci, sl.-r : 0, m
23			9, ci.-cu, ci.-s	10, ci, ci.-s : 10, h.-r
24			10, c.-h.-r : 10, ci.-s	10, ci.-s : 10, ci.-s : 0, h, l
25			0, h, ci, h.-fr	0 : 10, w, r
26			10, r : 3, ci, ci.-s	6, ci, ci.-s, sl.-r : v : 2
27			0, ci	2, ci : 10, s, ci.-s : 10, f
28			10, sc, sl.-r	10, th.-r : v, w : 0
29			0 : 0	4, ci, ci.-s : 0 : 0
30			10, s, ci.-s	9, ci, ci.-cu, ci.-s : 10, h-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 51°·8 on the 28th ; and the lowest was 27°·1 on the 10th.

The mean ,, was 37°·9, being 2°·1 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·228 being 0^{in}·025 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{grs}·6, being 0^{gr}·2 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 86 (that of Saturation being represented by 100), being 3 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 547 grains, being 1 grain *less* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·5.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·6.

WIND.

The proportions were of N. 5, S. 11, W. 7, E. 4, and Calm 3. The greatest recorded pressure in the month was 8^{lbs}·0 on the square foot on the 18th.

RAIN.

Fell on 13 days in the month, amounting to 2^{in}·57, as measured in the simple cylinder gauge partly sunk below the ground; being 0^{in}·14 *greater* than the average fall of the preceding 49 years.

ELECTRICITY.—The electrical apparatus was not yet restored.

MONTH and DAY, 1864.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 43 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure in lbs. on the square foot. Least.	Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Dec. 1	..	30·018	47·6	35·9	41·9	38·8	78·8	29·3	44·6	43·4	3·1	5·9	0·0	+ 0·2	SW	SW	0·0	0·0	0·0	163	0·00
2	..	30·232	45·5	30·9	38·6	35·2	63·8	26·2	..	..	3·4	6·1	0·0	— 3·2	SW	SW : S	0·0	0·0	0·0	235	0·00
3	..	30·196	49·7	42·0	46·9	44·4	54·2	30·0	44·9	43·7	2·5	4·4	1·8	+ 5·2	SSW	SW	0·8	0·0	0·0	374	0·01
4	..	30·121	48·4	43·0	46·1	42·4	51·2	43·0	44·6	43·1	3·7	5·0	1·1	+ 4·6	SW	SW	0·8	0·0	0·0	353	0·00
5	..	29·894	53·7	43·2	48·3	38·2	79·7	40·2	44·4	43·9	10·1	13·8	3·1	+ 6·9	SW	SW	1·5	0·0	0·1	309	0·00
6	First Quarter: In Equator: Perigee.	29·845	51·4	40·7	46·5	45·8	59·2	33·9	44·9	43·2	0·7	4·0	0·0	+ 5·4	SSW	SW	0·0	0·0	0·0	177	0·00
7	..	29·714	49·2	39·8	45·8	44·6	50·7	38·6	43·7	43·4	1·2	4·8	0·0	+ 5·1	SW : S	SSW	0·9	0·0	0·0	326	0·00
8	..	29·505	47·7	40·2	43·8	41·8	51·5	36·0	..	..	2·0	3·3	1·1	+ 3·2	S	SW : S	1·5	0·0	0·1	207	0·14
9	..	29·676	49·6	35·9	43·1	41·1	72·0	28·9	..	..	2·0	5·3	0·0	+ 2·6	SSW	SSW : SSE	0·0	0·0	0·0	152	0·00
10	..	29·689	46·3	35·9	40·4	38·4	50·0	30·0	43·8	43·2	2·0	7·1	0·0	0·0	SE	SE	0·0	0·0	0·0	149	0·00
11	..	29·536	50·5	35·2	45·7	43·8	74·0	27·6	44·2	40·0	1·9	6·9	0·0	+ 5·5	S	S	4·0	0·0	0·3	336	0·01
12	..	29·365	49·2	37·0	43·8	41·1	52·5	32·0	43·9	41·7	2·7	6·3	0·0	+ 3·8	SE	SSE : SW	2·8	0·0	0·2	201	0·01
13	Greatest Dec. N. : Full	29·405	46·0	35·8	41·8	41·1	67·0	28·7	42·9	41·2	0·7	1·9	0·0	+ 2·2	SE	E : SE	0·0	0·0	0·0	141	0·00
14	..	29·622	41·3	37·2	39·0	36·2	47·0	30·0	41·9	39·7	2·8	4·1	1·7	— 0·7	ENE	NE	0·0	0·0	0·0	233	0·00
15	..	29·576	36·0	33·2	33·9	27·9	36·0	33·0	40·8	39·7	6·0	6·3	3·3	— 6·1	NE	NE	0·0	0·0	0·0	240	0·00
16	..	29·660	35·6	30·5	32·5	27·6	36·0	25·7	40·4	39·8	4·9	5·9	3·7	— 7·8	NE	ENE	0·9	0·0	0·0	269	0·00
17	..	29·659	30·5	19·2	24·4	18·5	34·4	16·1	40·9	39·7	5·9	10·1	4·1	—15·7	Variable	NE : SE	0·0	0·0	0·0	124	0·00
18	..	29·676	35·8	17·3	29·5	27·7	35·9	14·8	39·2	39·2	1·8	3·2	0·0	—10·4	E : ESE	SE	0·0	0·0	0·0	136	0·11
19	..	29·773	41·6	25·3	34·7	33·0	61·0	22·7	39·9	38·7	1·7	4·8	0·0	— 4·8	SE	S : SSE	0·0	0·0	0·0	202	0·00
20	Apogee : In Equator.	29·708	46·7	35·3	42·0	40·9	61·0	33·8	42·9	38·4	1·1	4·6	0·0	+ 3·0	SE	SE	0·0	0·0	0·0	98	0·00
21	Last Qr.	29·819	41·5	36·5	38·9	33·6	47·0	34·2	42·9	38·4	5·3	7·4	0·0	+ 0·5	Variable	NW : N	1·6	0·0	0·1	356	0·01
22	..	30·054	37·3	32·7	34·3	27·7	38·7	32·0	43·4	38·4	6·6	8·4	3·1	— 3·6	NE	NE : E	3·0	0·0	1·0	352	0·00
23	..	30·276	33·6	30·0	31·3	21·8	33·6	29·2	43·1	37·7	9·5	14·1	4·6	— 6·1	E	ENE	4·2	0·0	1·1	320	0·00
24	..	30·393	32·5	27·1	30·7	22·9	34·8	24·1	43·6	37·0	7·8	9·4	7·3	— 6·3	NE : E	NE	2·0	0·0	0·1	257	0·00
25	..	30·268	34·5	31·7	33·4	26·2	36·2	31·2	44·9	36·9	7·2	7·6	4·8	— 3·1	E	ENE	0·0	0·0	0·0	282	0·00
26	..	30·130	35·1	31·8	33·1	26·5	38·2	30·6	43·4	36·5	6·6	8·1	5·1	— 3·3	E	ENE : NNE	0·0	0·0	0·0	53	0·00
27	Greatest Declination S.	30·144	35·4	27·8	31·7	25·5	39·5	21·6	43·5	35·0	6·2	8·3	4·9	— 4·8	N	N : SW	0·0	0·0	0·0	142	0·00
28	New	30·178	41·4	30·9	37·4	33·8	51·5	29·7	43·8	35·7	3·6	6·0	1·6	+ 0·4	SW	SW	0·0	0·0	0·0	156	0·00
29	..	30·164	43·5	39·8	41·7	36·6	52·3	38·0	43·9	35·9	5·1	6·8	2·8	+ 4·4	SW	SW	0·0	0·0	0·0	156	0·00
30	..	29·780	41·6	34·6	38·0	32·8	55·0	28·1	43·7	35·8	5·2	6·2	2·2	+ 0·6	SW	SW	0·0	0·0	0·0	181	0·00
31	..	29·666	38·0	29·7	33·7	30·5	42·0	19·3	43·6	36·9	3·2	6·0	1·2	— 3·3	N : NE	NE	0·0	0·0	0·0	106	0·00
Means	..	29·863	42·5	33·7	38·5	34·4	51·1	29·6	43·1	39·5	4·1	6·5	1·9	— 0·8	...	...	..	..	..	Sum 6788	Sum 0·5

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·242 on the 2nd; the first minimum in the month was 29in·471 on the 8th.
The second maximum ,, was 29in·735 on the 9th; the absolute minimum ,, was 29in·333 on the 12th.
The third maximum ,, was 29in·674 on the 14th; the third minimum ,, was 29in·544 on the 15th.
The fourth maximum ,, was 29in·732 on the 16th; the fourth minimum ,, was 29in·643 on the 17th.
The fifth maximum ,, was 29in·789 on the 19th; the fifth minimum ,, was 29in·661 on the 20th.
The absolute maximum ,, was 30in·418 on the 24th; the sixth minimum ,, was 30in·120 on the 26th.
The seventh maximum ,, was 30in·234 on the 29th; the seventh minimum ,, was 29in·623 on the 31st.

The range in the month was 1in·085.
The mean for the month was 29in·863, being 0in·042 *higher* than the average of the preceding 23 years.

TEMPERATURE OF THE AIR.

The highest in the month was 53°·7 on the 5th; the lowest was 17°·3 on the 18th.
The range ,, was 36°·4.
The mean ,, of all the highest daily readings was 42°·5, being 2°·8 *lower* than the average of the preceding 23 years.
The mean ,, of all the lowest daily readings was 33°·7, being 2°·0 *lower* than the average of the preceding 23 years.
The mean daily range was 8°·8, being 0°·8 *less* than the average of the preceding 23 years.
The mean for the month was 38°·5, being 1°·9 *lower* than the average of the preceding 23 years.

MONTH and DAY, 1864.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Dec. 1			4, ci, ci.-s	2, ci : o : c, sl.-f
2			2, ci, h, h.-fr, th.-f	2, ci : o : 10
3			10, sl.-r : 10, ci.-s, s.	10, ci.-s : 8, ci, ci.-s : 10
4			10 : 10	10 : 10, ci.-s, ci
5			3, ci, ci.-s	2, ci : o : o
6			9, ci, ci.-s, sl.-f	10, ci.-s : 5, ci, ci.-s, v : o, f
7			10	10 : 10, v
8			10, r	9, ci, ci.-s, v : 7, th.-cl, th.-r
9			2, ci, f	o, ci : 3, v, m : 10
10			o	3, ci, ci.-cu : o : o, f
11			10, sl.-r : 7, v v	7, li.-cl, v : o, ci.-s, w : 10, ci.-s, cu.-s, ci.-cu
12			9, ci, ci.-s	10, sl.-r : o
13			9, ci, ci.-s, s, f	10, ci.-s : 10, ci.-s
14			10 : 10, sl.-r	10 : 10
15			10 : 10, ci.-s	10, ci.-s : 10
16			10 : 10	10 : o : 10
17			10 : 10, sn	9, v, oc.-sn : o
18			10, sn	10, sn, th.-r : 10
19			10 : 10, v	2, ci, ci.-s, v : 10 : o, h
20	o	o : w	10, r : 10, ci.-s	6, ci, ci.-cu, cu, v: 10 : 10, sl.-f
21	o	o	10, glm, r	8, ci, ci.-cu, ci.-s : 10, ci.-s : 10
22	o	o	10 : 10	10, sl : 10, w
23	o	o	10 : 10, w	10, w : 10
24	o	o	10 : 10	10, li.-cl : 10, ci,-s
25	w	w	10 : 10	10, sl : 10
26	w	w : o	10 : 10, ci.-s	10, ci.-s : 10, ci.-s
27	w	w : o	7, ci, ci.-s	10, th.-cl, f : 10, sl.-f
28	o	w	8, ci, h.-fr	6, ci, ci.-cu, ci.-s, h, v: 10, sl.-f
29	w	w : o	10 : 10	10 : 10
30	o	w : o	10 : 10, ci.-s	10, ci.-s : v : 10
31	w	w : o	9, li.-cl, h.-fr	10, th.-r : 10, fr.-r : 10, sn

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 47°·7 on the 6th; and the lowest was 15°·2 on the 17th.

The mean ,, was 34°·4, being 2°·7 *lower* than the average of the preceding 23 years.

Elastic Force of Vapour.—The mean for the month was 0^{in}·199, being 0^{in}·024 *less* than the average of the preceding 23 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2^{gr}·3, being 0^{gr}·3 *less* than the average of the preceding 23 years.

Degree of Humidity.—The mean for the month was 86 (that of Saturation being represented by 100) being 2 *less* than the average of the preceding 23 years.

Weight of a Cubic Foot of Air.—The mean for the month was 556 grains, being 4 grains *greater* than the average of the preceding 23 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·9.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·0.

WIND.

The proportions were, N. 5, S. 12, W. 5, E. 9, and Calm 0. The greatest pressure in the month was 4^{lbs}·2 on the square foot on the 23rd.

RAIN.

Fell on 10 days in the month, amounting to 0^{in}·50, as measured in the simple cylinder gauge partly sunk below the ground; being 1^{in}·42 *less* than the average fall of the preceding 49 years.

ELECTRICITY.—The Electrical apparatus was furnished with a new insulating glass and was finally repaired on December 19.

MAXIMA AND MINIMA READINGS OF THE BAROMETER.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° Fahrenheit, extracted from the photographic records, except during the period from May 13 to June 26, when there were no photographic records. The readings are accurate; but the times are liable to great uncertainty, as the surface of the quicksilver frequently remains at its highest or lowest point through several hours. The time given is the middle of the stationary period. Where the symbol : follows the time, it denotes that the quicksilver has been sensibly stationary through a period of more than one hour.

MAXIMA.		MINIMA.		MAXIMA.		MINIMA.	
Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.
d h m	in.	d h m	in.	d h m	in.	d h m	in.
January 3. 10. 30:	30·483	January 8. 21. 0	29·771	May 17. 21. 0	30·106	May 20. 9. 0	29·806
12. 22. 30:	30·203	14. 18. 15:	30·111	21. 9. 0	29·905	22. 21. 0	29·803
15. 9. 25:	30·176	17. 3. 30:	29·796	24. 0. 0	30·118	25. 9. 0	29·773
19. 22. 40:	30·145	22. 18. 35:	29·553	26. 21. 0	29·927	28. 22. 15	29·725
25. 0. 0	30·303	28. 2. 15	29·738	29. 8. 30	29·868	31. 9. 0	29·573
29. 21. 0	30·354	February 3. 4. 30:	29·849	June 6. 3. 0	29·855	June 9. 3. 0	29·601
February 4. 20. 30:	30·096	10. 2. 0	29·275	10. 9. 0	29·770	14. 9. 0	29·353
11. 7. 30:	29·680	12. 1. 30	29·173	16. 21. 0	29·973	17. 21. 0	29·851
13. 22. 0	30·198	16. 2. 30	29·577	19. 9. 0	30·130	23. 3. 0	29·779
18. 21. 40	30·211	21. 6. 0:	29·500	24. 0. 0	30·046	26. 1. 0	29·751
24. 21. 45	29·836	29. 2. 0	29·460	27. 15. 0:	30·007	July 2. 16. 30:	29·458
March 1. 11. 0:	29·733	March 6. 22. 20	28·786	July 6. 10. 15:	30·020	9. 9. 25	29·885
7. 11. 45:	29·077	7. 21. 35	28·865	11. 21. 20	29·975	12. 22. 35	29·850
8. 11. 0:	29·101	8. 21. 30	28·914	15. 21. 45	30·007	21. 9. 0	29·705
10. 0. 0	29·559	11. 3. 0	29·380	22. 22. 30:	29·863	25. 9. 30	29·520
12. 21. 20:	30·109	15. 3. 30:	29·666	26. 20. 10:	29·824	27. 21. 35	29·672
16. 12. 0:	30·045	19. 23. 45	29·464	30. 22. 20:	30·056	August 0. 13. 10:	29·840
23. 13. 30:	29·878	28. 13. 0:	28·935	August 0. 21. 35	29·926	1. 5. 15:	29·866
30. 18. 45	29·670	April 1. 3. 0	29·500	2. 14. 25	29·993	4. 4. 55:	29·884
April 2. 15. 30:	29·846	3. 18. 50	29·688	4. 21. 20	30·012	7. 16. 20	29·640
5. 11. 15:	30·150	6. 3. 25	30·055	8 13. 30:	29·783	9. 4. 15:	29·625
7. 21. 0	30·241	15. 2. 40	29·525	13. 21. 10	30·307	19. 6. 5:	29·504
17. 21. 45	29·951	19. 5. 20	29·785	21. 20. 25:	29·838	22. 22. 40:	29·555
23. 22. 30	30·105	29. 9. 0	29·908	26. 21. 0	30·206	31. 0. 0	29·634
May 0. 22. 30	30·046	May 2. 20. 15	29·530	September 0. 21. 0	29·942	September 3. 3. 50:	29·523
3. 11. 0:	29·790	4. 0. 30	29·675	4. 8. 10	29·778	4. 15. 20:	29·656
5. 13. 45:	29·856	8. 20. 45	29·428	5. 14. 0:	29·945	6. 6. 0:	29·758
10. 15. 0:	29·766	11. 21. 0	29·638	8. 9. 30:	29·870	9. 4. 15:	29·727

MAXIMA AND MINIMA READINGS OF THE BAROMETER—*concluded.*

MAXIMA.		MINIMA.		MAXIMA.		MINIMA.	
Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.	Approximate Mean Solar Time, 1864.	Reading.
d h m	in.	d h m	in.	d h m	in.	d h m	in.
September 9. 19. 50:	29·890	September 10. 17. 20:	29·620	November 18. 21. 0	29·715	November 20. 2. 0:	29·425
12. 10. 15:	29·896	14. 6. 20:	29·389	21. 0. 40	29·718	22. 2. 10	29·335
14. 21. 0:	29·501	16. 6. 0:	29·200	22. 18. 0:	29·534	23. 18. 55:	29·040
19. 22. 20:	29·769	20. 16. 30	29·560	24. 21. 55:	29·267	25. 14. 20:	28·720
25. 21. 20	30·242	October 1. 4. 25:	29·935	27. 8. 30:	29·712	28. 0. 50	29·550
October 2. 22. 45	30·190	5. 3. 55:	29·896	29. 7. 50:	30·227	30. 7. 40:	29·880
10. 21. 25:	30·205	14. 3. 0	29·875	December 2. 9. 40:	30·247	December 7. 23. 30	29·470
14. 23. 0:	29·999	19. 15. 0	28·784	9. 11. 5:	29·735	12. 2. 0	29·324
20. 14. 0:	29·398	22. 19. 0:	28·901	14. 9. 40:	29·674	15. 14. 45:	29·527
24. 21. 55:	29·375	26. 17. 30:	29·050	16. 11. 55:	29·735	17. 3. 6:	29·643
November 3. 22. 40:	30·317	November 4. 19. 0:	30·154	19. 6. 45	29·798	19. 19. 0:	29·644
6. 7. 15	30·496	14. 2. 20	28·606	23. 22. 25:	30·418	26. 4. 40:	30·118
16. 13. 40:	29·340	17. (12. 0)	28·950	28. 21. 50:	30·236	31. 11. 25:	29·616

ABSOLUTE MAXIMA AND MINIMA READINGS OF THE BAROMETER, for each Month in the Year 1864.
[Extracted from the preceding Table.]

1864, MONTH.	Readings of the Barometer.		Range of Reading in each Month.
	Maxima.	Minima.	
	in.	in.	in
January	30·483	29·553	0·930
February	30·211	29·173	1·038
March	30·109	28·786	1·323
April	30·241	29·500	0·741
May	30·118	29·428	0·690
June	30·130	29·353	0·777
July	30·056	29·458	0·598
August	30·307	29·504	0·803
September	30·242	29·200	1·042
October	30·205	28·784	1·421
November	30·496	28·606	1·890
December	30·418	29·324	1·094

The highest reading in the year was 30in·496 in the month of November.
The lowest reading in the year was 28in·606 in the month of November.
The range of reading in the year was 1in·890.

MONTHLY MEANS of RESULTS for METEOROLOGICAL ELEMENTS at the ROYAL OBSERVATORY, GREENWICH, in the Year 1864.

1864, Month.	Mean Reading of the Barometer.	Temperature of the Air.							Mean Temperature of Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required to saturate a Cubic Foot of Air.
		Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Mean Temperature.				
	in.	°	°	°	°	°	°	°	°	in.	gr.	gr.
January ..	30·044	54·0	14·3	39·7	41·4	31·7	9·7	36·5	31·3	0·176	2·0	0·5
February..	29·760	53·8	20·1	33·7	41·5	31·2	10·3	36·0	31·3	0·176	2·0	0·5
March	29·503	58·0	26·9	31·1	49·8	34·3	15·5	41·3	36·2	0·215	2·5	0·6
April	29·915	73·8	33·4	40·4	58·3	40·0	18·3	48·2	40·0	0·248	2·9	1·0
May	29·837	81·0	33·4	47·6	64·8	44·9	19·9	53·8	45·6	0·306	3·5	1·1
June	29·792	78·4	42·3	36·1	69·5	49·1	20·4	57·4	48·7	0·344	3·9	1·4
July	29·856	85·6	45·8	39·8	75·3	51·2	24·1	61·8	51·6	0·382	4·2	1·9
August ...	29·918	88·6	38·1	50·5	72·8	48·5	24·3	59·6	47·8	0·333	3·7	2·0
September.	29·777	75·5	40·9	34·6	67·3	49·1	18·2	56·9	49·7	0·357	4·0	1·2
October ...	29·684	67·2	37·5	29·7	58·2	44·1	14·1	50·5	43·7	0·285	3·3	0·8
November .	29·626	54·4	25·9	28·5	48·5	35·5	13·0	42·0	37·9	0·228	2·6	0·5
December .	29·863	53·7	17·3	36·4	42·5	33·7	8·8	38·5	34·4	0·199	2·3	0·5
Means	29·798	68·7	31·3	37·3	57·5	41·1	16·4	48·5	41·5	0·271	3·1	1·0

1864. Month.	Mean Degree of Humidity. (Sat. = 100.)	Mean Weight of a Cubic Foot of Air.	Mean Amount of Cloud. 0–10	Rain.			Wind.										
				Number of Rainy Days.	Amount collected on the Ground.		From Osler's Anemometer.										From Robinson's Anemometer.
					Gauge read daily.	Gauge read Monthly.	Number of Days for Mean Direction of the Wind referred to different Points of Azimuth.								Number of Calm Days and Days on which the Pressure of the Wind was less than ½ lb. on the Sq. Foot.	Mean Daily Pressure in lbs. on Square Foot.	Mean Daily Horizontal Movement of Wind in Miles.
							N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.			
		gr.			in.	in.											
January.....	82	561	6·8	11	0·88	0·93	2	4	4	9	2	9	1	0	0	0·43	214
February.....	83	557	7·8	12	0·76	0·84	8	7	2	1	1	8	1	1	0	0·43	256
March	83	546	6·9	15	2·53	2·72	3	5	5	2	1	8	3	2	2	0·47	281
April.....	74	547	5·6	4	0·82	0·70	3	3	4	2	2	5	1	1	9	0·06	192
May	73	538	6·3	10	2·00	1·94	8	3	4	2	3	4	2	2	3	0·05	190
June.....	72	533	7·0	10	0·92	0·88	2	1	1	0	3	13	7	2	1	0·04	246
July.....	70	529	6·4	3	0·27	0·30	4	4	2	1	0	12	3	2	3	0·08	218
August	65	533	5·3	5	1·31	1·40	5	1	1	0	1	7	5	3	8	0·03	195
September.....	77	533	6·2	16	2·76	2·80	1	0	1	1	3	16	5	1	2	0·06	233
October.....	78	539	6·8	7	1·06	1·13	3	6	5	2	2	6	2	2	3	0·23	248
November.....	86	547	6·5	13	2·57	2·65	3	3	1	3	4	12	1	0	3	0·15	245
December	86	556	7·9	10	0·50	0·60	2	6	4	4	6	8	1	0	0	0·06	219
Means	77	543	6·6	Sum 116	Sum 16·38	Sum 16·89	Sum 44	Sum 43	Sum 34	Sum 27	Sum 28	Sum 108	Sum 32	Sum 16	Sum 34	..	..

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

WITH THE

ACTINOMETER.

1864.

OBSERVATIONS WITH THE ACTINOMETER.

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Readings of the Graduated Scale. Terminal B.	Change in One Minute, B–A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s.		div.	div.	div.	div.	div.	h m s	°	°	°		
Jan. 6	1. 44. 0	Sun	17·8	23·1	5·3					..	..	Cloudless.	N
	45. 30	Shade	24·6	25·1	0·5	5·3				..	..	,,	,,
	47. 0	Sun	27·6	33·8	6·2	5·9	5·4	1. 46. 45	12	..	..	,,	,,
	48. 30	Shade	34·2	34·4	0·2	5·1				..	..	,,	,,
	50. 0	Sun	34·6	39·0	4·4	4·2				..	..	,,	,,
	51. 30	Shade	39·7	40·0	0·3	4·0				..	..	,,	,,
	53. 0	Sun	40·0	44·3	4·3	4·1				..	..	,,	,,
	54. 30	Shade	44·7	44·8	0·1	4·7				..	..	,,	,,
	56. 0	Sun	44·8	50·0	5·2	5·4				..	..	,,	,,
	57. 30	Shade	50·2	49·8	−0·4	4·7	4·4	1. 58. 0	11	..	..	,,	,,
	1. 59. 0	Sun	49·5	53·0	3·5	4·0				..	..	,,	,,
	2. 0. 30	Shade	53·1	52·5	−0·6	4·1				..	..	,,	,,
	2. 0	Sun	52·0	55·6	3·6	4·4				..	..	,,	,,
	3. 30	Shade	55·8	54·9	−0·9	4·3				..	..	,,	,,
	5. 0	Sun	54·6	57·9	3·3	4·0				..	..	,,	,,
	6. 30	Shade	58·0	57·5	−0·5	3·6				..	..	,,	,,
	8. 0	Sun	57·0	59·9	2·9	3·6	3·5	2. 8. 30	10	..	..	,,	,,
	9. 30	Shade	60·1	59·3	−0·8	3·2				..	..	,,	,,
	11. 0	Sun	59·0	60·8	1·8	2·5				..	..	,,	,,
	12. 30	Shade	60·6	60·0	−0·6	2·4				..	..	,,	,,
	14. 0	Sun	59·5	61·3	1·8	2·4	2·4	2. 15. 15	10	..	..	,,	,,
	15. 30	Shade	61·3	60·8	−0·5	2·3				..	..	,,	,,
	17. 0	Sun	60·2	62·0	1·8	2·5				..	..	,,	,,
	2. 18. 30	Shade	62·0	61·2	−0·8					..	..	,,	N
Jan. 11	2. 15. 0	Sun	11·6	17·9	6·3					..	..	Clear.	N
	16. 30	Shade	17·8	15·8	−2·0	8·0				..	..	,,	,,
	18. 0	Sun	14·7	20·5	5·8	7·8				..	..	,,	,,
	19. 30	Shade	20·4	18·5	−1·9	7·9				..	..	,,	,,
	21. 0	Sun	17·6	23·8	6·2	8·1				..	..	,,	,,
	22. 30	Shade	23·5	21·5	−2·0	7·8				..	..	,,	,,
	24. 0	Sun	20·5	25·9	5·4	7·4	7·7	2. 23. 45	9	..	..	,,	,,
	25. 30	Shade	25·2	23·2	−2·0	7·6				..	..	,,	,,
	27. 0	Sun	22·0	27·7	5·7	7·8				..	..	,,	,,
	28. 30	Shade	27·7	25·6	−2·1	7·6				..	..	,,	,,
	1. 30. 0	Sun	23·8	29·0	5·2	7·1				..	..	,,	,,
	2. 31. 30	Shade	28·9	27 2	−1·7					..	..	,,	N
Jan. 11	2. 55. 0	Sun	9·2	13·0	3·8					..	..	Clear.	N
	56. 30	Shade	12·6	10·2	−2·4	5·9				..	..	,,	,,
	58. 0	Sun	8·9	12·0	3·1	5·6	5·8	2. 58. 30	7	..	..	,,	,,
	2. 59. 30	Shade	12·4	9·8	−2·6	5·9				..	..	,,	,,
	3. 1. 0	Sun	8·0	11·5	3·5					..	..	,,	N
Jan. 25	23. 55. 0	Sun	40·7	53·6	12·9					..	..	Clear.	N
	56. 30	Shade	56·2	58·5	2·3	11·2				..	..	,,	,,
	58. 0	Sun	59·5	73·5	14·0	11·8	11·7	23. 58. 30	19	..	..	,,	,,
	23. 59. 30	Shade	76·0	78·0	2·0	12·0				..	..	,,	,,
26	0. 1. 0	Sun	79·2	93·3	14 1					..	..	,,	N
Jan. 26	0. 21. 0	Sun	6·0	19·8	13·8					..	..	Clear.	N
	22. 30	Shade	22·0	23·7	1·7	12·6				..	..	,,	,,
	24. 0	Sun	24·1	38·8	14·7	13·0				..	..	,,	,,
	25. 30	Shade	41·0	42·6	1·6	12·2				..	..	,,	,,
	27. 0	Sun	43·2	56·1	12·9	11·6	12·8	0. 27. 30	19	..	..	,,	,,
	28. 30	Shade	58·5	59·5	1·0	12·8				..	..	,,	,,
	30. 0	Sun	59·7	74·3	14·6	13·7				..	..	,,	,,
	31. 30	Shade	76·5	77·3	0·8	14·0				..	..	,,	,,
	0. 33. 0	Sun	77·7	92·8	15·1					..	..	,,	N

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			Initial A.	Terminal B.									
	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Jan. 26	1. 22. 0	Sun	8·0	18·2	10·2					..	..	Light clouds over the Sun.	N
	23. 30	Shade	19·6	19·5	−0·1	10·6				..	..	,,	,,
	25. 0	Sun	19·3	30·0	10·7	10·7	10·6	1. 25. 30	16	..	..	,,	,,
	26. 30	Shade	31·0	31·0	0·0	10·5				..	..	,,	,,
	1. 28. 0	Sun	30·6	40·9	10·3					..	..	,,	N
Jan. 28	1. 43. 0	Sun	19·8	21·2	1·4					..	..	Sun obscured by dense cirro-stratus clouds throughout this set of Observations.	N
	44. 30	Shade	21·7	22·0	0·3	1·1				..	..		,,
	46. 0	Sun	22·0	23·3	1·3	1·0				..	..	,,	,,
	47. 30	Shade	23·7	24·0	0·3	1·1	1·1	1. 48. 0	14	..	..	,,	,,
	49. 0	Sun	24·0	25·5	1·5	1·2				..	..	,,	,,
	50. 30	Shade	25·8	26·0	0·2	1·1				..	..	,,	,,
	1. 52. 0	Sun	26·0	27·1	1·1					..	..	,,	N
Jan. 28	22. 56. 0	Sun	2·0	14·8	12·8					..	..	Sun free from cloud.	N
	57. 30	Shade	17·2	19·4	2·2	7·7				..	..	,,	,,
	22. 59. 0	Sun	20·4	27·4	7·0	5·1				..	..	Clouds passing over the Sun.	,,
	23. 0. 30	Shade	28·9	30·5	1·6	8·8				..	..	,,	,,
	2. 0	Sun	31·4	45·2	13·8	12·1				..	..	Clear about the Sun.	,,
	3. 30	Shade	47·7	49·5	1·8	12·1				..	..	,,	,,
	5. 0	Sun	50·5	64·5	14·0	12·1				..	..	,,	,,
	6. 30	Shade	67·1	69·0	1·9	13·0				..	..	,,	,,
	8. 0	Sun	70·0	85·8	15·8	13·9	11·7	23. 7. 0	17	..	..	,,	,,
	9. 30	Shade	88·5	90·5	2·0	12·7				..	..	,,	,,
	11. 0	Sun	3·3	17·0	13·7	11·8				..	..	Light clouds.	,,
	12. 30	Shade	19·3	21·2	1·9	13·4				..	..	A dense small cloud. Sun wholly obscured.	,,
	14. 0	Sun	22·1	39·0	16·9	15·0				..	..	Quite clear about the Sun.	,,
	15. 30	Shade	42·0	43·9	1·9	13·8				..	..	,,	,,
	23. 17. 0	Sun	44·5	59·1	14·6					36·0	..	,,	N
Jan. 29	2. 49. 0	Sun	10·0	18·6	8·6					38·2	..	Clear throughout.	N
	50. 30	Shade	19·4	18·8	−0·6	9·0				..	..	,,	,,
	52. 0	Sun	18·3	26·5	8·2	8·9				..	..	,,	,,
	53. 30	Shade	27·0	26·2	−0·8	9·2	9·0	2. 54. 0	9	..	..	,,	,,
	55. 0	Sun	26·0	34·6	8·6	9·5				..	..	,,	,,
	56. 30	Shade	35·0	34·0	−1·0	8·5				..	..	,,	,,
	2. 58. 0	Sun	33·3	39·7	6·4					39·8	..	,,	N
Feb. 1	2. 41. 0	Sun	21.6	28·3	6·7					28·0	..	Cloudy throughout.	N
	42. 30	Shade	29.8	31·8	2·0	4·1				..	..	,,	,,
	44. 0	Sun	32.5	37·9	5·4	3·6				..	..	,,	,,
	45. 30	Shade	39.3	40·9	1.6	5·3	5·3	2. 46. 0	11	..	..	,,	,,
	47. 0	Sun	41.5	49·9	8·4	6·8				..	..	,,	,,
	48. 30	Shade	51.5	53·0	1·5	6·7				..	..	,,	,,
	2. 50. 0	Sun	53.8	61·8	8·0					29·8	..	,,	N
Feb. 6	2. 6. 0	Sun	15·2	18·9	3·7					20·0	..	Dense clouds; Sun seen occasionally.	N
	7. 30	Shade	20·0	21·5	1·5	2·3				..	..	,,	,,
	9. 0	Sun	22·0	25·9	3·9	2·6	2·6	2. 9. 30	16	..	..	,,	,,
	10. 30	Shade	27·0	28·1	1·1	2·8				..	..	,,	,,
	2. 12. 0	Sun	28·5	32·4	3·9					21·0	..	,,	N
Feb. 6	2. 19. 0	Sun	40·3	49·5	9·2					..	..	Sun shining brightly.	N
	20. 30	Shade	51·5	52·9	1·4	4·8	4·8	2. 21. 0	15	..	..	,,	,,
	2. 22. 0	Sun	53·2	56·4	3·2					..	..	Dense clouds.	N

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Mar. 2	2. 36. 0	Sun	18·0	23·0	5·0					38·0	..	Cloudy.	N
	37. 30	Shade	24·1	26·1	2·0	5·2				..	..	,,	,,
	39. 0	Sun	26·8	36·2	9·4	7·6				..	..	,,	,,
	40. 30	Shade	37·7	39·3	1·6	6·4	6·0	2. 41. 0	21	..	..	,,	,,
	42. 0	Sun	40·1	46·6	6·5	5·1				..	..	,,	,,
	43. 30	Shade	47·9	49·1	1·2	5·6				..	..	,,	,,
	2. 45. 0	Sun	49·5	56·6	7·1					40·0	..	,,	N
Mar. 14	2. 41. 0	Sun	26·2	32·4	6·2					43·8	..	Sun obscured by dense cirro-stratus cloud.	N
	42. 30	Shade	33·6	34·8	1·2	4·1	3·7	2. 43. 45	25	..	..	,,	,,
	44. 0	Sun	35·2	39·6	4·4	3·3				..	..	,,	,,
	45. 30	Shade	40·5	41·5	1·0					..	..	,,	,,
	47. 0	Sun	41·5	60·5	19·0	18·1				..	..	Clear about Sun.	,,
	48. 30	Shade	63·3	64·1	0·8	18·0				..	..	,,	,,
	50. 0	Sun	64·3	82·9	18·6	17·8	17·0	2. 50. 30	25	..	..	,,	,,
	51. 30	Shade	18·0	18·8	0·8	16·2				..	..	,,	,,
	53. 0	Sun	19·1	34·5	15·4	14·7				..	..	Thin clouds.	,,
	2. 54. 30	Shade	36·7	37·3	0·6					46·0	.	,,	N
Mar. 15	22. 18. 0	Sun	11·5	25·8	14·3					30·3	..	Cloudless.	N
	19. 30	Shade	28·1	29·4	1·3	13·2				..	..	,,	,,
	21. 0	Sun	29·7	44·4	14·7	13·5				..	..	,,	,,
	22. 30	Shade	47·0	48·2	1·2	14·3	14·2	22. 23. 0	32	..	..	,,	,,
	24. 0	Sun	48·5	64·8	16·3	15·0				..	..	,,	,,
	25. 30	Shade	67·5	68·8	1·3	14·9				..	..	,,	,,
	22. 27. 0	Sun	69·2	85·4	16·2					34·0	..	,,	N
Mar. 15	23. 40. 0	Sun	8·8	31·5	22·7					44·0	..	Clear.	N
	41. 30	Shade	34·8	36·0	1·2	20·8				..	..	,,	,,
	43. 0	Sun	37·0	58·4	21·4	20·3				..	..	,,	,,
	44. 30	Shade	61·8	62·8	1·0	19·2				..	..	,,	,,
	46. 0	Sun	63·4	82·4	19·0	18·0				..	..	,,	,,
	47. 30	Shade	7·2	8·2	1·0	18·9				..	..	,,	,,
	49. 0	Sun	9·0	29·8	20·8	20·3				..	..	,,	,,
	50. 30	Shade	32·4	32·4	0·0	20·2				..	..	,,	,,
	52. 0	Sun	32·4	51·9	19·5	19·5	19·1	23. 51. 0	37	..	..	,,	,,
	53. 30	Shade	53·8	53·8	0·0	16·5				..	..	,,	,,
	55. 0	Sun	53·6	67·0	13·4	13·6				..	..	Light clouds passing over. The Sun was obscured for 50s.	,,
	56. 30	Shade	68·7	68·3	−0·4	17·8				..	..	Light clouds.	,,
	58. 0	Sun	68·2	89·5	21·3	21·9				..	..	Clear.	,,
	23. 59. 30	Shade	91·5	90·7	−0·8	21·7				..	..	,,	,,
16	0. 1. 0	Sun	13·7	34·2	20·5					51·3	..	,,	N
Mar. 16	2. 26. 0	Sun	14·2	34·2	20·0					53·8	..	Clear.	N
	27. 30	Shade	34·8	32·6	−2·2	20·6				..	..	,,	,,
	29. 0	Sun	31·6	48·3	16·7	19·5				..	..	,,	,,
	30. 30	Shade	48·8	45·5	−3·3	20·0				..	..	,,	,,
	32. 0	Sun	43·9	60·5	16·6	20·0				..	..	,,	,,
	33. 30	Shade	60·6	57·1	−3·5	19·8	19·7	2. 34. 0	27	..	..	,,	,,
	35. 0	Sun	55·2	71·2	16·0	19·6				..	..	,,	,,
	36. 30	Shade	71·2	67·6	−3·6	19·6				..	..	,,	,,
	38. 0	Sun	65·8	81·8	16·0	19·6				..	..	,,	,,
	39. 30	Shade	81·9	78·2	−3·7	18·4				..	..	,,	,,
	2. 41. 0	Sun	76·1	89·5	13·4					56·0	..	,,	N

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Mar. 17	23. 26. 0	Sun	18·5	35·3	16·8					28·0	54·3	Clear throughout.	N
	27. 30	Shade	38·8	41·5	2·7	14·7				..	..	,,	,,
	29. 0	Sun	42·6	60·6	18·0	15·1				..	..	,,	,,
	30. 30	Shade	64·7	67·8	3·1	15·0				..	..	,,	,,
	32. 0	Sun	68·9	87·1	18·2	15·9				..	..	,,	,,
	33. 30	Shade	8·0	9·5	1·5	16·7	15·9	23. 34. 0	37	..	..	,,	,,
	35. 0	Sun	9·9	28·2	18·3	16·2				..	..	,,	,,
	36. 30	Shade	32·0	34·7	2·7	16·2				..	..	,,	,,
	38. 0	Sun	35·7	55·1	19·4	16·6				..	..	,,	,,
	39. 30	Shade	58·8	61·7	2·9	16·7				..	..	,,	,,
	23. 41. 0	Sun	62·7	82·6	19·9					34·0	57·4	,,	N
Mar. 18	0. 28. 0	Sun	16·2	37·8	21·6					42·0	58·6	Clear throughout.	N
	29. 30	Shade	40·7	42·2	1·5	19·9				..	..	,,	,,
	31. 0	Sun	42·6	63·8	21·2	19·9				..	..	,,	,,
	32. 30	Shade	66·7	67·8	1·1	20·3				..	..	,,	,,
	34. 0	Sun	68·2	89·8	21·6	20·6				..	..	,,	,,
	35. 30	Shade	92·5	93·3	0·8	20·7	20·4	0. 36. 0	36	..	..	,,	,,
	37. 0	Sun	7·5	28·9	21·4	20·7				..	..	,,	,,
	38. 30	Shade	30·5	31·1	0·6	20·4				..	..	,,	,,
	40. 0	Sun	30·9	51·5	20·6	20·0				..	..	,,	,,
	41. 30	Shade	52·3	52·9	0·6	20·8				..	..	,,	,,
	0. 43. 0	Sun	52·8	75·0	22·2					48·0	62·8	,,	N
Mar. 18	2. 4. 0	Sun	7·5	25·5	18·0					51·4	57·8	Clear throughout.	N
	5. 30	Shade	26·8	24·7	−2·1	20·7				..	..	,,	,,
	7. 0	Sun	23·7	42·9	19·2	21·0				..	..	,,	,,
	8. 30	Shade	42·5	41·1	−1·4	20·7	21·1	2. 9. 0	32	..	..	,,	,,
	10. 0	Sun	40·3	59·7	19·4	21·5				..	..	,,	,,
	11. 30	Shade	60·5	57·7	−2·8	21·6				..	..	,,	,,
	2. 13. 0	Sun	57·0	75·2	18·2					51·0	65·8	,,	N
Mar. 18	2. 47. 0	Sun	10·3	26·8	16·5					51·0	47·8	Clear throughout.	N
	48. 30	Shade	26·5	23·7	−2·8	15·9				..	..	,,	,,
	50. 0	Sun	23·0	32·7	9·7	12·7				..	..	,,	,,
	51. 30	Shade	31·7	28·5	−3·2	15·4	15·7	2. 52. 0	27	..	..	,,	,,
	53. 0	Sun	27·3	42·0	14·7	18·2				..	..	,,	,,
	54. 30	Shade	41·9	38·0	−3·9	16·3				..	..	,,	,,
	2. 56. 0	Sun	36·5	46·5	10·0					52·2	60·6	,,	N
Mar. 19	3. 22. 0	Sun	58·0	71·6	13·6					39·7	63·8	Clear.	N
	23. 30	Shade	73·7	75·5	1·8	11·7				..	..	,,	,,
	25. 0	Sun	75·1	88·4	13·3	11·6				..	..	,,	,,
	26. 30	Shade	88·0	89·5	1·5	11·7				..	..	,,	,,
	28. 0	Sun	13·6	26·7	13·1	11·9				..	..	,,	,,
	29. 30	Shade	29·3	30·1	0·8	13·0	12·6	3. 30. 0	21	..	..	,,	,,
	31. 0	Sun	30·5	45·0	14·5	13·8				..	..	Light cirrus.	,,
	32. 30	Shade	47·0	47·6	0·6	13·3				..	..	,,	,,
	34. 0	Sun	47·5	60·8	13·3	12·9				..	..	,,	,,
	35. 30	Shade	62·7	62·9	0·2	13·8				..	..	,,	,,
	3. 37. 0	Sun	63·0	77·8	14·8					43·0	..	,,	N
Mar. 19	3. 57. 0	Sun	11·0	24·8	13·8					44·0	53·5	Clear with the exception of a few light Clouds.	N
	3. 58. 30	Shade	26·0	26·0	0·0	13·6				..	..		..
	4. 0. 0	Sun	25·8	39·2	13·4	13·6				..	..	,,	..
	1. 30	Shade	40·5	40·0	−0·5	12·2	12·0	4. 2. 0	18	..	60·0	,,	..
	3. 0	Sun	39·0	49·0	10·0	10·7				..	..	,,	..
	4. 30	Shade	49·8	48·9	−0·9	9·9				..	..	,,	..
	4. 6. 0	Sun	48·8	56·8	8·0					45·0	60·8	,,	N

In every observation, whether in the Sun's rays or in the shade, the terminal reading was taken exactly one minute after the initial reading.
The "Apparent Effect of the Sun's Radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.
The initial N is that of Mr. W. C. Nash.

OBSERVATIONS WITH THE ACTINOMETER—*continued.*

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Readings of the Graduated Scale. Terminal B.	Change in One Minute, B − A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Mar. 21	2. 36. 0	Sun	13·2	29·0	15·8					41·0	59·9	Clear about Sun.	N
	37. 30	Shade	31·7	33·8	2·1	14·6				..	..	,,	,,
	39. 0	Sun	34·5	52·1	17·6	15·8				..	63·5	,,	,,
	40. 30	Shade	54·7	56·2	1·5	10·4				..	..	,,	,,
	42. 0	Sun	56·8	63·0	6·2	5·0	11·1	2. 42. 30	27	..	55·0	Cloudy.	,,
	43. 30	Shade	65·3	66·1	0·8	9·6				..	53·9	,,	,,
	45. 0	Sun	66·4	81·0	14·6	13·8				..	58·7	No clouds about Sun.	,,
	46. 30	Shade	83·0	83·7	0·7	8·8				..	57·3	Cloudy.	,,
	2. 48. 0	Sun	83·9	88·3	4·4					43·0	55·5	,,	N
Mar. 23	2. 26. 0	Sun	7·8	27·0	19·2					54·0	68·5	Light cirrus.	N
	27. 30	Shade	29·5	30·1	0·6	18·7				..	66·5	,,	,,
	29. 0	Sun	30·3	49·7	19·4	19·0	18·7	2. 29. 30	30	..	65·6	,,	,,
	30. 30	Shade	52·0	52·2	0·2	18·3				..	65·6	,,	,,
	2. 32. 0	Sun	52·2	70·2	18·0					56·0	65·0	,,	N
Mar. 23	2. 56. 0	Sun	20·0	38·8	18·8					53·0	64·2	Clear.	N
	57. 30	Shade	40·2	39·5	−0·7	18·9				..	..	,,	,,
	2. 59. 0	Sun	39·3	57·0	17·7	18·7	19·1	2. 59. 30	28	..	63·2	,,	,,
	3. 0. 30	Shade	58·2	56·8	−1·4	19·7				..	64·7	,,	,,
	3. 2. 0	Sun	56·4	75·3	18·9					54·0	64·3	,,	N
Mar. 24	0. 41. 0	Sun	10·9	27·5	16·6					32·4	67·8	Clear throughout.	N
	42. 30	Shade	30·5	33·5	3·0	13·8				..	69·0	,,	,,
	44. 0	Sun	34·8	51·7	16·9	13·9				..	67·8	,,	,,
	45. 30	Shade	55·0	58·0	3·0	14·2				..	67·5	,,	,,
	47. 0	Sun	59·5	77·0	17·5	14·4				..	67·5	,,	,,
	48. 30	Shade	80·3	83·5	3·2	14·2	14·3	0. 49. 0	39	..	..	,,	,,
	50. 0	Sun	12·2	29·5	17·3	14·2				..	..	,,	,,
	51. 30	Shade	32·8	35·8	3·0	14·5				..	66·6	,,	,,
	53. 0	Sun	37·3	55·0	17·7	14·6				..	..	,,	,,
	54. 30	Shade	59·0	62·2	3·2	14·6				..	67·0	,,	,,
	0. 56. 0	Sun	64·0	82·0	18·0					39·7	67·2	,,	N
Mar. 24	1. 26. 0	Sun	0·3	19·4	19·1					46·6	80·3	Clear.	N
	27. 30	Shade	23·2	26·7	3·5	16·1				..	73·5	,,	,,
	29. 0	Sun	28·5	48·5	20·0	16·6				..	73·0	,,	,,
	30. 30	Shade	52·5	55·8	3·3	16·7				..	..	,,	,,
	32. 0	Sun	56·2	76·2	20·0	17·0	17·0	1. 32. 30	36	..	65·5	,,	,,
	33. 30	Shade	79·3	81·9	2·6	17·2				..	..	,,	,,
	35. 0	Sun	7·0	26·6	19·6	17·4				..	68·5	,,	,,
	36. 30	Shade	29·0	30·8	1·8	17·7				..	..	,,	,,
	1. 38. 0	Sun	31·5	51·0	19·5					50·0	71·0	,,	N
Mar. 24	23. 40. 0	Sun	2·7	5·8	3·1					22·0	53·3	Sun partially obscured by light clouds. Haze.	N
	41. 30	Shade	6·1	6·1	0·0	2·0				..	..	,,	,,
	43. 0	Sun	5·6	6·5	0·9	0·9	2·0	23. 43. 30	40	..	55·4	,,	,,
	44. 30	Shade	6·5	6·5	0·0	3·1				..	56·0	,,	,,
	23. 46. 0	Sun	6·5	11·7	5·2					23·8	..	,,	N
Mar. 24	23. 48. 0	Sun	2·0	12·8	10·8					24·0	62·2	Light cirrus.	N
	49. 30	Shade	15·0	17·0	2·0	8·3				..	..	,,	,,
	51. 0	Sun	17·5	27·3	9·8	7·8				..	64·3	,,	,,
	52. 30	Shade	30·6	32·6	2·0	6·7				..	..	,,	,,
	54. 0	Sun	34·0	41·6	7·6	5·6	7·4	23. 54. 30	40	..	60·8	Clouds somewhat denser about the Sun.	,,
	55. 30	Shade	43·5	45·5	2·0	6·6				..	59·0	,,	,,
	57. 0	Sun	47·0	56·6	9·6	7·6				..	56·1	,,	,,
	23. 58. 30	Shade	58·8	60·8	2·0	9·3				..	55·6	Thin clouds.	,,
Mar. 25	0. 0. 0	Sun	61·6	74·6	13·0					29·8	59·0 62·5	,,	N

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The initial N is that of Mr. W. C. Nash.

OBSERVATIONS WITH THE ACTINOMETER—*continued.*

Day. 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays or in the Shade.	Readings of the Graduated Scale. Initial A.	Terminal B.	Change in One Minute, B−A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	div.	div	h m s	°	°	°		
Mar. 25	1. 21. 0	Sun	12·0	31·9	19·9					44·0	67·8	Clear about the Sun.	N
	22. 30	Shade	34·2	37·6	3·4	16·6				..	..	,,	,,
	24. 0	Sun	38·8	58·8	20·0	17·0	17·0	1. 24. 30	37	..	69·0	,,	,,
	25. 30	Shade	62·1	64·8	2·7	17·5				..	67·5	,,	,,
	1. 27. 0	Sun	66·2	86·7	20·5					48·0	68·0	,,	
April 6	4. 58. 0	Sun	9·0	11·0	2·0					31·8	47·8	Overcast: dense clouds.	N
	4. 59. 30	Shade	11·9	13·6	1·7	0·2				..	..	,,	,,
	5. 1. 0	Sun	14·0	15·8	1·8	0·4				..	46·8	,,	,,
	2. 30	Shade	16·6	17·7	1·1	0·6	0·5	5. 3. 0	14	..	..	,,	,,
	4. 0	Sun	18·0	19·5	1·5	0·6				..	..	,,	,,
	5. 30	Shade	19·9	20·5	0·6	0·5				..	46·2	,,	,,
	5. 7. 0	Sun	21·0	21·7	0·7					31·8	46·0	,,	N
April 13	1. 53. 0	Sun	0·6	18·8	18·2					34·2	71·0	Clear throughout.	N
	54. 30	Shade	22·2	25·0	2·8	15·8				..	71·1	,,	,,
	56. 0	Sun	26·0	45·0	19·0	16·1				..	72·1	,,	,,
	57. 30	Shade	49·0	52·0	3·0	16·8				..	70·2	,, Brisk wind.	,,
	1. 59. 0	Sun	53·1	73·8	20·7	17·9				..	71·2	,,	,,
	2. 0. 30	Shade	77·8	80·5	2·7	17·8	17·3	2. 1. 0	41	..	..	,,	,,
	2. 0	Sun	3·6	24·0	20·4	17·5				..	73·7	,,	,,
	3. 30	Shade	27·6	30·6	3·0	17·8				..	..	,,	,,
	5. 0	Sun	31·9	53·1	21·2	18·2				..	72·0	,,	,,
	6. 30	Shade	57·1	60·0	2·9	18·2				..	69·7	,,	,,
	2. 8. 0	Sun	61·5	82·5	21·0					41·3	71·2	,,	N
April 14	22. 34. 0	Sun	3·2	21·5	18·3					30·5	82·5	Clear.	N
	35. 30	Shade	25·2	29·0	3·8	15·3				..	82·5	,,	,,
	37. 0	Sun	30·8	50·7	19·9	15·5				..	..	,,	,,
	38. 30	Shade	55·8	60·8	5·0	15·8				..	83·8	,,	,,
	40. 0	Sun	63·1	84·9	21·8	16·8	17·3	22. 41. 15	44	..	..	,,	,,
	41. 30	Shade	90·5	95·4	4·9	18·2				..	86·1	,,	,,
	43. 0	Sun	3·5	28·0	24·5	19·1				..	87·0	,,	,,
	44. 30	Shade	33·1	39·0	5·9	18·7				..	..	,,	,,
	46. 0	Sun	42·0	66·7	24·7	18·8				..	86·6	,,	,,
	22. 47. 30	Shade	73·0	78·9	5·9					41·0	86·0	,,	N
April 15	2. 21. 0	Sun	0·0	27·0	27·0					72·0	83·0	Clear.	N
	22. 30	Shade	28·8	28·1	−0·7	27·3				..	85·0	,,	,,
	24. 0	Sun	27·5	53·7	26·2	27·2				..	..	,,	,,
	25. 30	Shade	55·1	53·9	−1·2	26·9	27·1	2. 26. 0	37	..	88·0	,,	,,
	27. 0	Sun	53·0	78·2	25·2	26·9				..	..	,,	,,
	28. 30	Shade	79·9	77·7	−2·2	27·3				..	88·5	,,	,,
	2. 30. 0	Sun	76·8	101·8	25·0					78·4	86·6	,,	N
April 18	22. 56. 0	Sun	5·4	29·5	24·1					42·2	77·0	Clear.	N
	57. 30	Shade	34·2	39·3	5·1	19·7				..	77·4	,,	,,
	22. 59. 0	Sun	41·6	67·0	25·4	20·3				..	78·3	,,	,,
	23. 0. 30	Shade	72·0	77·1	5·1	14·9	17·2	23. 0. 15	47	..	78·4	,,	,,
	2. 0	Sun	0·0	14·6	14·6	12·3				..	79·8	,,	,,
	23. 3. 30	Shade	15·2	14·7	−0·5	18·8				..	80·0	,,	N

In every observation, whether in the Sun's rays or in the shade, the terminal reading was taken exactly one minute after the initial reading.

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April 6. The observations on this day were made for comparison with observations by Mr. Glaisher during his balloon ascent from Woolwich.

OBSERVATIONS WITH THE ACTINOMETER—*continued.*

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Readings of the Graduated Scale. Terminal B.	Change in One Minute, B–A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer. on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
April 18	23. 5. 0	Sun	14·7	36·7	22·0	20·8				..	77·7	Clear.	N
continued	6. 30	Shade	40·0	42·9	2·9	21·6				..	77·0	„	„
	8. 0	Sun	44·4	71·4	27·0	23·1				..	77·0	„	„
	9. 30	Shade	5·5	10·4	4·9	22·5	22·3	23. 9. 15	47	..	77·0	„	„
	11. 0	Sun	12·9	40·7	27·8	22·8				..	77·0	„	„
											77·2		
	12. 30	Shade	45·8	51·0	5·2	22·9				..	80·0	„	„
	14. 0	Sun	52·8	81·2	28·4	23·7				..	79·4	„	„
	15. 30	Shade	2·8	7·0	4·2	24·6				..	77·2	„	„
	17. 0	Sun	8·8	38·0	29·2	25·2				..	77·0	„	„
											76·5		
	18. 30	Shade	44·5	48·3	3·8	25·0	24·4	23. 19. 0	48	..	..	„	„
	20. 0	Sun	51·2	79·6	28·4	24·4				..	77·0	„	„
											78·0		
	21. 30	Shade	9·5	13·8	4·3	23·7				..	..	„	„
	23. 23. 0	Sun	15·0	42·6	27·6					58·0	77·0	„	„
											77·0	„	N
April 19	0. 35. 0	Sun	6·0	34·4	28·4					65·0	82·9	Clear.	N
											83·9		
	36. 30	Shade	37·4	37·8	0·4	27·9				..	..	„	„
	38. 0	Sun	37·8	65·9	28·1	27·9				..	86·8	„	„
											87·8		
	39. 30	Shade	68·9	68·9	0·0	28·2	28·1	0. 40. 0	48	..	88·8	„	„
	41. 0	Sun	68·9	97·2	28·3	28·4				67·8	87·6	„	„
											87·2		
	42. 30	Shade	1·8	1·6	−0·2	28·2				..	..	„	„
	0. 44. 0	Sun	1·5	29·2	27·7					68·2	88·0	„	N
											87·2		
April 20	2. 33. 0	Sun	4·9	29·0	24·1					72·4	92·5	Light cirrus clouds are prevalent.	N
											90·0		
	34. 30	Shade	30·5	29·1	−1·4	25·9				..	..	„	„
	36. 0	Sun	28·2	53·1	24·9	26·7				..	90·0	„	„
											90·0		
	37. 30	Shade	54·7	52·6	−2·1	25·6	25·5	2. 38. 0	38	..	..	„	„
	39. 0	Sun	51·5	73·6	22·1	24·3				..	91·4	„	„
	40. 30	Shade	74·2	72·0	−2·2	25·1				..	..	„	„
	2. 42. 0	Sun	71·4	95·1	23·7					76·0	91·9	„	N
											92·0		
May 16	0. 20. 0	Sun	5·9	31·8	25·9					50·6	90.5	Cloudless.	N
											89·0		
	21. 30	Shade	36·8	41·2	4·4	22·2				..	..	„	„
	23. 0	Sun	43·7	71·0	27·3	22·7				..	85·5	„	„
	24. 30	Shade	76·2	81·0	4·8	17·6				..	..	„	„
	26. 0	Sun	3·1	20·5	17·4	14·4				..	..	„	„
	27. 30	Shade	22·5	23·8	1·3	20·8	21·4	0. 28. 0	56	..	85·2	„	„
	29. 0	Sun	24·7	51·5	26·8	23·9				..	88·0	„	„
	30. 30	Shade	56·2	60·7	4·5	22·9				..	90·0	„	„
	32. 0	Sun	62·0	90·0	28·0	23·5				..	92·0	„	„
	33. 30	Shade	7·8	12·2	4·4	24·5				..	93·7	„	„
	0. 35. 0	Sun	15·5	45·2	29·7					60·0	93·2	„	N
											93·0		

In every observation, whether in the Sun's rays or in the shade, the terminal reading was taken exactly one minute after the initial reading.
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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
May 16	2. 9. 0	Sun	6·1	34·9	28·8	..	..	..	..	74·4	92·6	Cloudless.	N
											92·2		
	10. 30	Shade	38·0	38·4	0·4	27·7				..	..	,,	,,
	12. 0	Sun	38·4	65·8	27·4	27·6				..	92·1	,,	,,
											92·0		
	13. 30	Shade	68·1	67·4	−0·7	27·9				..	..	,,	,,
	15. 0	Sun	67·0	94·0	27·0	28·0				..	91·0	,,	,,
	16. 30	Shade	3·0	1·8	−1·2	28·1	28·3	2. 17. 0	47	..	..	,,	,,
											93·3		
	18. 0	Sun	0·9	27·8	26·9	28·4				..	93·2	,,	,,
	19. 30	Shade	29·3	27·4	−1·9	28·8				..	93·2	,,	,,
	21. 0	Sun	26·5	53·4	26·9	29·0				..	94·0	,,	,,
	22. 30	Shade	54·6	52·3	−2·3	29·4				..	95·2	,,	,,
	2. 24. 0	Sun	51·5	78·8	27·3	..	..	..	..	79·8	95·0	,,	N
											93·0		
May 18	0. 6. 0	Sun	0·9	27·9	27·0	..	..	..	..	51·3	102·9	Cloudless.	N
	7. 30	Shade	33·0	38·5	5·5	22·4				..	104·4	,,	,,
	9. 0	Sun	41·0	69·8	28·8	22·7				..	105·8	,,	,,
	10. 30	Shade	75·5	82·1	6·6	23·1				..	106·1	,,	,,
	12. 0	Sun	2·0	32·6	30·6	23·7				..	..	,,	,,
	13. 30	Shade	38·8	46·0	7·2	24·2	23·7	0. 14. 0	57	56·0	107·6	,,	,,
	15. 0	Sun	49·9	82·1	32·2	24·3				..	108·0	,,	,,
	16. 30	Shade	2·0	10·6	8·6	24·1				..	108·0	,,	,,
	18. 0	Sun	14·8	48·0	33·2	24·2				..	108·7	,,	,,
	19. 30	Shade	57·0	66·3	9·3	24·7				..	108·0	,,	,,
	0. 21. 0	Sun	57·0	91·8	34·8	..	..	..	..	62·1	108·3	,,	N
May 18	2. 56. 0	Sun	0·3	24·7	24·4	..	..	..	..	68·0	96·2	Cloudless.	N
	57. 30	Shade	27·0	27·3	0·3	24·0				..	99·4	,,	,,
	2. 59. 0	Sun	27·2	51·4	24·2	23·8				..	101·1	,,	,,
	3. 0. 30	Shade	54·0	54·5	0·5	24·9	24·6	3. 1. 0	42	..	100·0	,,	,,
	2. 0	Sun	54·7	81·2	26·5	25·5				..	100·5	,,	,,
	3. 30	Shade	2·1	3·5	1·4	24·8				..	98·0	,,	,,
	3. 5. 0	Sun	4·0	29·9	25·9	..	..	..	..	71·0	97·1	,,	N
											96·0		
May 30	2. 28. 0	Sun	15·5	22·0	6·5	..	..	..	..	42·8	69·6	Cloudy. Sun obscured.	N
	29. 30	Shade	23·2	24·8	1·6	4·5				..	69·0	,, ,,	,,
	31. 0	Sun	25·4	31·0	5·6	4·3				..	68·6	,, ,,	,,
	32. 30	Shade	32·2	33·2	1·0	4·8				..	69·0	,, ,,	,,
	34. 0	Sun	33·8	39·8	6·0	5·1				..	69·0	,, ,,	,,
	35. 30	Shade	40·8	41·6	0·8	5·4	5·2	2. 36. 0	47	..	.	,, ,,	,,
	37. 0	Sun	42·0	48·4	6·4	5·6				..	69·4	,, ,,	,,
	38. 30	Shade	49·5	50·3	0·8	5·7				..	69·1	,, ,,	,,
	40. 0	Sun	51·3	57·9	6·6	5·7				..	..	,, ,,	,,
	41. 30	Shade	58·8	59·7	0·9	5·8				..	68·2	,, ,,	,,
	2. 43. 0	Sun	60·2	67·0	6·8	..	..	..	..	45·0	65·8	,, ,,	N
June 8	2. 47. 0	Sun	24·7	67·0	42·3	..	..	..	..	59·0	90·8	Clear about the sun. Haze.	N
	48. 30	Shade	71·1	76·0	4·9	38·6				..	97·0	,,	,,
	50. 0	Sun	3·2	47·9	44·7	39·1				..	99·2	,,	,,
	51. 30	Shade	54·3	60·6	6·3	36·9				..	99·3	,,	,,
	53. 0	Sun	7·2	48·9	41·7	34·6	38·3	2. 53. 30	47	..	98·9	Light clouds.	,,
	54. 30	Shade	56·0	63·9	7·9	37·5				..	94·0	Clear about the Sun.	,,
	56. 0	Sun	33·0	82·0	49·0	40·7				..	93·0	,,	,,
	57. 30	Shade	90·3	99·0	8·7	40·5				..	93·5	,,	,,
	2. 59. 0	Sun	14·0	63·3	49·3	..	..	..	..	64·6	93·6	,,	N

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OBSERVATIONS WITH THE ACTINOMETER—*continued.*

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Readings of the Graduated Scale. Terminal B.	Change in One Minute, B–A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
June 8	23. 17. 0	Sun	4·4	42·6	38·2					55·0	87·8	Sun partially obscured by clouds.	N
	18. 30	Shade	49·6	56·0	6·4	34·9				..	89·4	Light clouds about the Sun.	,,
	20. 0	Sun	58·6	103·0	44·4	36·6				..	..	,,	,,
	21. 30	Shade	8·9	18·0	9·1	34·4				..	94·7	,,	,,
	23. 0	Sun	22·0	64·6	42·6	33·1				..	83·0	Clouds denser about the Sun.	,,
											86·8		
	24. 30	Shade	73·0	82·8	9·8	32·2	32·0	23. 25. 0	60	..	..	,,	,,
	26. 0	Sun	10·0	51·5	41·5	31·3				..	91·4	Sun shining through clouds.	,,
	27. 30	Shade	60·2	70·8	10·6	28·7				..	87·8	,,	,,
	29. 0	Sun	7·0	44·2	37·2	26·5				..	81·1	Sun entirely obscured.	,,
											80·8		
	30. 30	Shade	52·2	63·0	10·8	30·7				..	..	,,	,,
	23. 32. 0	Sun	6·3	52·0	45·7					62·3	85·9	Clouds less dense.	N
											85·4		
June 9	23. 21. 0	Sun	12·0	49·0	37·0					52·6	79·5	Sun free from clouds; many clouds in all directions.	N
	22. 30	Shade	54·3	58·9	4·6	33·1				..	82·1	,,	,,
	24. 0	Sun	60·7	99·0	38·3	32·8				..	86·1	Clouds passing over the Sun.	,,
	25. 30	Shade	3·5	10·0	6·5	34·2				..	82·0	,,	,,
	27. 0	Sun	11·9	55·0	43·1	36·6				..	..	,,	,,
	28. 30	Shade	61·8	68·2	6·4	28·6				..	83·5	Sun entirely obscured by dense clouds.	,,
											84·2		
	30. 0	Sun	37·5	64·4	26·9	20·5				..	82·0	Sun obscured by dense clouds for 20s.; partially obscured during the remaining 40 seconds.	,,
											80·3		
	31. 30	Shade	69·0	75·4	6·4	26·3				..	..	Light clouds.	,,
	33. 0	Sun	8·0	46·6	38·6	31·0	30·6	23. 33. 30	60	..	81·2	,,	,,
											83·6		
	34. 30	Shade	54·0	62·8	8·8	34·4				..	..	Sun free from clouds.	,,
	36. 0	Sun	5·0	52·7	47·7	38·7				..	85·7	,,	,,
											87·5		
	37. 30	Shade	61·0	70·2	9·2	38·8				..	88·5	,,	,,
	39. 0	Sun	2·5	50·7	48·2	38·4				58·0	93·0	,,	,,
											93·2		
	40. 30	Shade	60·5	70·8	10·3	29·4				..	..	,,	,,
	42. 0	Sun	6·6	37·8	31·2	21·5				..	84·4	Sun again obscured.	,,
	43. 30	Shade	46·0	55·1	9·1	15·0				..	80·4	,,	,,
	23. 45. 0	Sun	57·0	74·0	17·0					61·0	77·4	Sun entirely obscured by dense clouds.	N
											76·0		
June 10	0. 46. 0	Sun	20·2	42·0	21·8					69·5	79·2	Sun obscured by dense clouds, 40 seconds.	N
	47. 30	Shade	45·0	49·2	4·2	31·2	31·2	0. 48. 0	59	..	..		,,
	49. 0	Sun	51·0	100·0	49·0	44·6				..	83·4	Sun free from cloud.	,,
	50. 30	Shade	6·5	11·0	4·5	43·6	43·6	0. 51. 0	59	..	89·2	,,	,,
	52. 0	Sun	13·0	60·2	47·2	42·7				..	92·7	,,	,,
	53. 30	Shade	67·0	71·5	4·5	25·7				..	94·4	,,	,,
	55. 0	Sun	3·0	16·2	13·2	9·8	16·7	0. 56. 15	59	..	83·4	Sun obscured by dense clouds.	,,
	56. 30	Shade	18·7	21·0	2·3	14·7				..	85·0	Sun again free from cloud.	,,
	0. 58. 0	Sun	22·2	43·0	20·8					72·0	84·6	Sun obscured, 45 seconds.	N

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
June 10	7. 34. 0	Sun	5·5	10·5	5·0					64·0	65·2	Clear about the Sun.	N
	35. 30	Shade	9·2	3·6	−5·6	9·4				..	..	,,	,,
	37. 0	Sun	2·0	4·6	2·6	8·2				..	64·5	Cirro-stratus. Sun partially obscured.	,,
	38. 30	Shade	13·0	7·4	−5·6	7·5	7·6	7. 39. 0	4	..	64·6	,,	,,
	40. 0	Sun	4·9	6·1	1·2	7·0				..	65·0	,,	,,
	41. 30	Shade	21·7	15·7	−6·0	6·0				..	64·8	,,	,,
	7. 43. 0	Sun	13·0	11·7	−1·3					62·4	64·6	,,	N
June 10	23. 4. 0	Sun	25·4	73·0	47·6					52·9	84·6	Clear about the Sun.	N
	5. 30	Shade	5·5	13·0	7·5	42·7				..	87·0	,,	,,
	7. 0	Sun	16·5	69·3	52·8	44·7				..	93·0	,,	,,
	8. 30	Shade	78·8	87·4	8·6	44·7	44·1	23. 7. 30	59	..	100·8	,,	,,
										..	99·7	,,	,,
	10. 0	Sun	8·0	61·8	53·8	44·1				55·1	103·2	,,	,,
	11. 30	Shade	72·0	82·8	10·8	38·6				..	98·8	Light wind.	,,
	13. 0	Sun	18·8	63·8	45·0	33·6	37·2	23. 13. 30	59	..	89·0	Sun shining through thin clouds.	,,
	14. 30	Shade	72·1	84·1	12·0	39·5				..	89·6	,,	,,
	16. 0	Sun	7·0	65·0	58·0	45·3				58·2	92·0	Clear about the Sun.	,,
	17. 30	Shade	76·3	89·7	13·4	45·7	46·0	23. 18. 0	59	..	92·5	,,	,,
	19. 0	Sun	9·6	69·7	60·1	47·1				..	94·0	,,	,,
	20. 30	Shade	81·8	94·3	12·5	49·7				..	95·0	,,	,,
	22. 0	Sun	6·4	70·6	64·2	51·4				..	..	,,	,,
	23. 30	Shade	83·8	97·0	13·2	51·1	50·7	23. 23. 15	60	61·3	91·7	,,	,,
										..	92·2	,,	,,
	25. 0	Sun	5·6	70·0	64·4	50·6				..	94·4	,,	,,
	26. 30	Shade	82·0	96·3	14·3	42·7				..	90·6	,,	,,
	28. 0	Sun	8·6	58·2	49·6	35·4	38·6	23. 29. 15	60	..	92·5	Light clouds over the Sun for 40 seconds.	,,
										..	96·3		,,
	29. 30	Shade	69·1	83·1	14·0	37·8				66·2	..	Light clouds.	,,
													,,
	23. 31. 0	Sun	17·0	71·0	54·0					67·4	94·8	Dense clouds 25 seconds.	N
										..	89·0		
June 21	6. 44. 0	Sun	13·0	28·6	15·6					60·5	65·8	Clear.	N
	45. 30	Shade	29·7	30·3	0·6	14·4				..	66·4	,,	,,
	47. 0	Sun	29·8	44·1	14·3	13·9				..	66·0	,,	,,
	48. 30	Shade	44·7	44·9	0·2	12·9	12·2	6. 49. 0	11	..	66·0	,,	,,
	50. 0	Sun	44·9	56·7	11·8	12·2				..	65·2	,,	,,
	51. 30	Shade	58·0	57·0	−1·0	12·4				..	65·3	,,	,,
	6. 53. 0	Sun	56·0	67·0	11·0					60·9	64·6	,,	N
July 5	0. 58. 0	Sun	3·2	42·2	39·0					53·4	92·0	Clear.	N
	0. 59. 30	Shade	45·9	54·0	8·1	30·3				..	..	,,	,,
	1. 1. 0	Sun	57 2	95·0	37·8	29·9	30·9	1. 0. 45	58	..	97·0	,,	,,
	2. 30	Shade	9·0	16·8	7·8	32·4				..	111·0	,,	,,
	4. 0	Sun	19·5	62·0	42·5	34·2				..	110·7	,,	,,
	5. 30	Shade	69·1	77·8	8·7	36·1	36·6	1. 7. 30	58	..	100·6	,,	,,
	7. 0	Sun	7·4	54·6	47·2	37·7				..	97·0	,,	,,
	8. 30	Shade	61·8	72·0	10·2	38·4				..	100·8	,,	,,
	1. 10. 0	Sun	11·4	61·4	50·0					59·0	98·0	,,	N

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	h m s		div.	div.	div.	div.	div.	h m s	°		°		
July 11	2. 13. 0	Sun	15·0	64·2	49·2					66·0	94·8	Clear about the Sun.	N
											98·9		
	14. 30	Shade	70·6	73·9	3·3	46·2				..	..	,,	,,
	16. 0	Sun	11·0	60·7	49·7	46·3				..	97·8	,,	,,
											103·0		
	17. 30	Shade	67·0	70·5	3·5	46·9	46·7	2. 19. 30	50	..	104·0	,,	,,
	19. 0	Sun	6·0	57·1	51·1	47·4				..	106·0	,,	,,
	20. 30	Shade	64·2	68·1	3·9	46·7				..	110·0	,,	,,
	22. 0	Sun	50·0	100·0	50·0	46·0				..	116·0	,,	,,
	23. 30	Shade	30·8	34·9	4·1	47·7				..	..	,,	,,
	2. 25. 0	Sun	41·5	95·0	53·5					69·9	112·0	,,	N
											111·0		
July 11	2. 50. 0	Sun	15·6	74·2	58·6					73·0	92·8	Clear.	N
											95·2		
	51. 30	Shade	81·0	86·0	5·0	53·7				..	..	,,	,,
	53. 0	Sun	5·8	64·5	58·7	53·9				..	93·5	,,	,,
											94·8		
	54. 30	Shade	70·0	74·6	4·6	52·7	53·0	2. 55. 0	45	..	..	,,	,,
	56. 0	Sun	18·0	73·8	55·8	51·4				..	102·9	,,	,,
											105·0		
	57. 30	Shade	80·0	84·2	4·2	53·3				..	..	,,	,,
	2. 59. 0	Sun	19·8	79·0	59·2					76·0	102·8	,,	N
											106·0		
July 12	2. 52. 0	Sun	11·8	60·6	48·8					60·0	94·6	Clear.	N
	53. 30	Shade	67·0	73·0	6·0	43·8				..	97·0	,,	,,
	55. 0	Sun	8·2	59·0	50·8	44·0				..	99·0	,,	,,
	56. 30	Shade	72·0	79·6	7·6	43·9	43·4	2. 57. 0	45	..	101·2	,,	,,
	58. 0	Sun	7·0	59·2	52·2	43·5				..	100·5	,,	,,
	2. 59. 30	Shade	67·0	76·8	9·8	42·0				..	103·6	,,	,,
	3. 1. 0	Sun	23·2	74·7	51·5					65·0	107·0	,,	N
											101·2		
July 12	22. 34. 0	Sun	11·0	45·7	34·7					53·0	79·6	Very cloudy: Sun seen occasionally.	N
											81·0		
	35. 30	Shade	51·8	56·4	4·6	(20·4)				..	81·6	,,	,,
	37. 0	Sun	58·6	73·8	15·2	10·7				..	81·5	Sky entirely covered with dense cirro-stratus.	,,
											81·0		
	38. 30	Shade	78·0	82·5	4·5	9·8				..	77·7	,,	,,
	40. 0	Sun	16·0	29·4	13·4	8·6				..	75·4	,,	,,
	41. 30	Shade	31·8	36·9	5·1	7·3				..	73·9	,,	,,
	43. 0	Sun	39·0	50·4	11·4	6·6				..	72·2	,,	,,
											71·8		
	44. 30	Shade	53·0	57·5	4·5	7·5	8·4	22. 44. 15	57	..	71·2	,,	,,
	46. 0	Sun	60·0	72·5	12·5	8·1				..	72·0	,,	,,
											72·1		
	47. 30	Shade	76·0	80·2	4·2	8·0				..	71·3	,,	,,
	49. 0	Sun	82·5	94·5	12·0	7·9				..	70·6	,,	,,
											72·8		
	50. 30	Shade	8·5	12·5	4·0	9·4				..	..	,,	,,
	22. 52. 0	Sun	14·4	29·2	14·8					56·2	74·6	,,	,,
											75·2		N
July 13	23. 6. 0	Sun	6·8	48·6	41·8					51·0	78·2	Cloudless.	N
											81·4		
	7. 30	Shade	54·7	60·0	5·3	36·6				..	83·2	,,	,,
	9. 0	Sun	9·6	51·6	42·0	36·0	36·2	23. 9. 30	58	..	88·8	,,	,,
	10. 30	Shade	58·5	65·3	6·8	36·2				..	94·0	,,	,,
	23. 12. 0	Sun	2·0	46·0	44·0	36·1				..	97·0	,,	N
											100·2		

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
July 13 (*cont.*)	23. 13. 30	Shade	53·5	62·6	9·1	38·4				..	..	Cloudless.	N
	15. 0	Sun	6·5	57·5	51·0	41·3				..	102·0	,,	,,
											102·0		
	16. 30	Shade	66·7	77·0	10·3	39·5	39·3	23. 17. 45	58				
	18. 0	Sun	8·2	56·9	48·7	38·1				..	..	,,	,,
	19. 30	Shade	68·0	79·0	11·0	39·0				..	98·2	,,	,,
	23. 21. 0	Sun	9·0	60·3	51·3					..	..	,,	,,
										58·0	97·9	,,	,,
											95·8	,,	N
July 14	2. 0. 0	Sun	4·6	56·7	52·1					87·0	89·6	Cloudless.	N
											90·3		
	1. 30	Shade	59·2	55·4	−3·8	56·0				..	..	,,	,,
	3. 0	Sun	53·7	106·0	52·3	55·5	56·0	2. 2. 45	51	..	96·8	,,	,,
	4. 30	Shade	10·0	7·4	−2·6	56·4				..	101·4	,,	,,
	6. 0	Sun	6·2	61·5	55·3	58·4				..	100·8	,,	,,
											100·6		
	7. 30	Shade	64·6	61·0	−3·6	58·8				..	..	,,	,,
	9. 0	Sun	4·0	59·0	55·0	58·8				..	103·2	,,	,,
							58·5	2. 10. 15	50		103·2		
	10. 30	Shade	61·5	57·5	−4·0	58·4				..	..	,,	,,
	12. 0	Sun	8·9	62·6	53·7	58·4				89·0	103·8	,,	,,
											103·8		
	13. 30	Shade	64·0	58·5	−5·5	58·1				..	..	,,	,,
	15. 0	Sun	5·6	57·0	51·4	56·9	56·7	2. 17. 0	50	..	104·4	,,	,,
	16. 30	Shade	58·4	52·9	−5·5	56·5				..	100·6	,,	,,
	2. 18. 0	Sun	14·0	64·7	50·7					90·7	98·0	,,	,,
											100·8	,,	N
July 14	23. 26. 0	Sun	23·5	83·7	60·2					72·0	97·8	Cloudless.	N
											98·0		
	27. 30	Shade	72·5	86·5	14·0	46·2				..	..	,,	,,
	29. 0	Sun	8·7	68·8	60·1	46·3				..	100·3	,,	,,
											104·7		
	30. 30	Shade	79·0	92·6	13·6	47·2				..	..	,,	,,
	32. 0	Sun	6·0	67·6	61·6	49·7				..	106·8	,,	,,
											102·0		
	33. 30	Shade	77·0	87·2	10·2	49·1				76·0	..	,,	,,
	35. 0	Sun	3·6	60·6	57·0	46·9				..	101·7	,,	,,
											99·0		
	36. 30	Shade	69·9	79·9	10·0	48·1	48·6	23. 37. 0	59				
	38. 0	Sun	8·4	67·6	59·2	49·7				..	..	,,	,,
											97·9	,,	,,
											96·8		
	39. 30	Shade	76·8	85·8	9·0	48·8				..	..	,,	,,
	41. 0	Sun	6·5	62·8	56·3	48·5				78·2	95·0	,,	,,
											100·5		
	42. 30	Shade	71·5	78·0	6·5	49·9				..	..	,,	,,
	44. 0	Sun	8·5	65·0	56·5	50·7				..	102·8	,,	,,
	45. 30	Shade	79·0	84·0	5·0	50·8				..	..	,,	,,
	23. 47. 0	Sun	6·3	61·4	55·1					81·8	108·0	,,	,,
											110·7	,,	N
July 15	1. 30. 0	Sun	1·6	40·6	39·0					74·0	101·0	Cloudless ; haze.	N
											98·6		
	31. 30	Shade	43·2	43·2	0·0	39·2				..	..	,,	,,
	33. 0	Sun	43·0	82·4	39·4	39·0	39·1	1. 32. 0	53	..	97·3	,,	,,
											98·6		
	34. 30	Shade	85·3	86·1	0·8	40·8				..	..	,,	,,
	36. 0	Sun	6·0	49·8	43·8	42·6	41·8	1. 37. 15	53	..	99·0	,,	,,
	37. 30	Shade	54·2	55·8	1·6	42·0				..	98·0	,,	,,
	1. 39. 0	Sun	46·4	89·8	43·4					79·0	97·2	,,	N
											94·6		

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OBSERVATIONS WITH THE ACTINOMETER—*continued.*

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Readings of the Graduated Scale. Terminal B.	Change in One Minute, B–A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean Result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	divi	div.	h m s	°	°	°		
July 20	1. 38. 0	Sun	9·0	55·0	46·0					64·0	90·4 96·8	Cloudless.	N
	39. 30	Shade	62·0	68·0	6·0	42·3				..	..	,,	,,
	41. 0	Sun	13·0	63·7	50·7	43·7				..	101·0 101·6	,,	,,
	42. 30	Shade	70·9	78·8	7·9	44·1				..	..	,,	,,
	44. 0	Sun	6·8	60·2	53·4	44·9				..	100·8 102·2	,,	,,
	45. 30	Shade	69·0	78·2	9·2	43·3	42· 9	1. 46. 0	51	..	..	,,	,,
	47. 0	Sun	8·2	59·9	51·7	41·9				..	109·7 111·0	,,	,,
	48. 30	Shade	69·0	79·4	10·4	41·8				..	..	,,	,,
	50. 0	Sun	8·0	60·8	52·8	42·8				..	105·0 102·5	,,	,,
	51. 30	Shade	70·9	80·5	9·6	41·7				..	..	,,	
	1. 53. 0	Sun	12·8	62·7	49·9					70·0	98·0 95·5	,,	,, N
Aug. 3	22. 29. 0	Sun	4·9	51·0	46·1					64·0	89·7 90·8	Cloudless.	N
	30. 30	Shade	55·6	59·6	4·0	41·6				..	..	,,	,,
	32. 0	Sun	61·6	106·6	45·0	39·2				..	91·5 93·9	,,	,,
	33. 30	Shade	17·0	24·7	7·7	40·0	41· 0	22. 32. 30	52	..	..	,,	,,
	35. 0	Sun	27·8	78·2	50·4	43·2				..	.. 102·8	,,	,,
	36. 30	Shade	86·5	93·2	6·7	46·0				..	..	,,	,,
	38. 0	Sun	10·8	65·8	55·0	47·6				..	96·0 96·0	,,	,,
	39. 30	Shade	72·5	80·6	8·1	48·4	47· 4	22. 40. 45	52	..	..	,,	,,
	41. 0	Sun	7·0	65·0	58·0	48·6				..	97·2 97·4	,,	,,
	42. 30	Shade	73·5	84·2	10·7	46·6				..	..	,,	,,
	22. 44. 0	Sun	23·0	79·7	56·7					72·0	97·2 98·2	,,	N
Aug. 4	3. 7. 0	Sun	12·6	61·0	48·4					78·8	95·4	Clear.	N
	8. 30	Shade	65·2	67·1	1·9	35·5				..	101·0	,,	,,
	10. 0	Sun	67·6	94·0	26·4	24·2				..	105·0	Clouds over the Sun.	,,
	11. 30	Shade	9·7	12·2	2·5	30·1	34· 0	3. 12. 0	38	..	101·7	Clouds somewhat broken.	,,
	13. 0	Sun	13·0	51·8	38·8	35·6				..	101·4	,,	,,
	14. 30	Shade	55·9	59·7	3·8	44·7				..	102·7	,,	,,
	3. 16. 0	Sun	9·0	67·2	58·2					80·2	104·6	Sun free from clouds.	N
Aug. 5	2. 58. 0	Sun	19·0	63·0	44·0					77·0	97·4 98·5	Cloudless.	N
	2. 59. 30	Shade	67·6	72·0	4·4	41·4				..	..	,,	,,
	3. 1. 0	Sun	5·2	52·2	47·0	42·3				..	103·0 103·4	,,	,,
	2. 30	Shade	57·2	62·2	5·0	42·0	41. 7	3. 3. 0	39	..	..	,,	,,
	4. 0	Sun	4·0	50·9	46·9	41·5				..	108·8 111·3	,,	,,
	5. 30	Shade	57·0	62·8	5·8	41·8				..	..	,,	,,
	3. 7. 0	Sun	5·7	54·0	48·3					81·0	111·0 111·0	,,	N

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Aug. 10	23. 34. 0	Sun	10·5	49·8	39·3					58·0	73·2	Clear about the Sun.	N
											81·6		
	35. 30	Shade	54·0	58·0	4·0	36·9				..	..	,,	,,
	37. 0	Sun	59·0	101·4	42·4	36·9				..	95·5	,,	,,
											101·6		
	38. 30	Shade	12·2	19·2	7·0	34·1				..	..	,,	,,
	40. 0	Sun	20·4	60·2	39·8	33·3				..	105·0	,,	,,
	41. 30	Shade	68·0	74·0	6·0	36·5				..	107·8	,,	,,
	43. 0	Sun	33·5	78·8	45·3	38·5	37·0	23. 42. 0	53	..	105·3	,,	,,
											106·0		
	44. 30	Shade	84·8	92·5	7·7	38·6				..	..	,,	,,
	46. 0	Sun	6·8	54·2	47·4	38·9				..	103·0	,,	,,
											106·2		
	47. 30	Shade	61·2	70·4	9·2	39·4				..	..	,,	,,
	23. 49. 0	Sun	16·0	65·9	49·9					65·5	102·1	,,	,,
											105·0		N
Aug. 19	2. 25. 0	Sun	32·5	40·5	8·0					63·0	70·3	Cirro-stratus and cumulo-stratus.	N
	26. 30	Shade	43·7	46·2	2·5	5·4				..	..	,,	,,
	28. 0	Sun	47·2	55·1	7·9	5·7				..	71·2	,,	,,
	29. 30	Shade	56·1	58·0	1·9	5·1	5·0	2. 30. 0	39	..	71·5	,,	,,
	31. 0	Sun	59·0	65·0	6·0	4·4				..	70·8	,,	,,
	32. 30	Shade	66·2	67·5	1·3	4·4				..	70·7	,,	,,
	2. 34. 0	Sun	69·6	75·0	5·4					64·0	70·0	,,	N
Aug. 19	2. 57. 0	Sun	2·0	38·1	36·1					66·0	78·0	Light clouds.	N
	2. 58. 30	Shade	43·0	48·0	5·0	32·2				..	83·8	,,	,,
	3. 0. 0	Sun	50·0	88·2	38·2	33·0	31·9	2. 59. 45	36	..	88·4	,,	,,
	1. 30	Shade	93·0	98·4	5·4	30·6				..	..	,,	,,
	3. 0	Sun	8·4	42·1	33·7	28·3				..	84·2	,,	,,
	4. 30	Shade	46·6	52·0	5·4	20·1	24·2	3. 5. 0	36	..	..	,,	,,
	3. 6. 0	Sun	55·0	72·2	17·2					69·0	84·7	Clouds becoming denser.	N
Aug. 26	2. 47. 0	Sun	14·0	24·5	10·5					64·0	69·0	Partially cloudy. Sun obscured.	N
											66·2	Cirro-stratus.	
	48. 30	Shade	26·2	28·0	1·8	7·4				..	..	,,	,,
	50. 0	Sun	29·4	37·2	7·8	6·2	6·8	2. 49. 45	36	..	63·7	Occasional gleams of sunshine.	,,
											62·7		
	51. 30	Shade	38·2	39·6	1·4					..	..	,,	,,
	53. 0	Sun	40·0	75·2	35·2	33·6				..	65·8	Sun free from cloud.	,,
											71·8		
	54. 30	Shade	78·1	79·9	1·8	32·4	32·4	2. 55. 0	36	..	..	,,	,,
	56. 0	Sun	40·6	73·8	33·2	31·2				..	75·7	,,	,,
	57. 30	Shade	76·5	78·7	2·2	36·0				..	76·5	,,	,,
	2. 59. 0	Sun	6·7	50·0	43·3	40·0	38·3	3. 0. 15	35	..	79·0	,,	,,
											79·2		
	3. 0. 30	Shade	54·0	58·3	4·3	39·0				..	..	,,	,,
	3. 2. 0	Sun	59·2	102·5	43·3					67·0	78·9	,,	N
											81·2		
Aug. 29	2. 37. 0	Sun	7·7	54·2	46·5					69·0	96·0	Clear.	N
											97·2		
	38. 30	Shade	59·0	65·0	6·0	40·2	40·1	2. 39. 0	36	..	..	,,	,,
	2. 40. 0	Sun	65·0	111·0	46·0	40·0				..	98·7	,,	N
											97·0		

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	h m s		div.	div.	d v.	div.	div.	h m s	°	°	°		
Aug. 29 *cont.*)	2. 41. 30	Shade	66·6	72·6	6·0	37·5				..	..	Light clouds.	N
	43. 0	Sun	2·0	43·0	41·0	33·8				..	94·6	,,	,,
	44. 30	Shade	46·5	55·0	8·5	33·3				..	..	,,	,,
	46. 0	Sun	6·0	48·6	42·6	34·5	33·5	2. 45. 45	36	..	96·0	Cloudless near Sun.	,,
											94·9		
	47. 30	Shade	55·0	62·7	7·7	28·6				..	..	Light clouds.	,,
											89·6		
	2. 49. 0	Sun	66·2	96·2	30·0					72·5	87·2	,,	N
Aug. 30	3. 21. 0	Sun	6·5	50·0	43·5					72·0	87·2	Cloudless.	N
											87·2		
	22. 30	Shade	54·3	58·0	3·7	40·6				..	..	,,	,,
	24. 0	Sun	8·9	54·1	45·2	41·1				..	83·8	,,	,,
											87·7		
	25. 30	Shade	58·5	63·0	4·5	41·2	41·6	3. 26. 0	30	..	..	,, Strong breeze.	,,
	27. 0	Sun	26·0	72·2	46·2	42·0				..	90·3	,,	,,
											88·8		
	28. 30	Shade	77·8	81·6	3·8	43·0				..	..	,,	,,
	3. 30. 0	Sun	30·7	78·1	47·4					76·0	88·4	,,	N
											90·8		
Sept. 14	1. 53. 0	Sun	21·6	30·6	9·0					63·0	65·0	Dense cirro-stratus clouds; strong wind.	N
											65·5		
	54. 30	Shade	32·6	35·1	2·5	6·6				..	..	Occasional gleams of sunshine.	,,
	56. 0	Sun	36·4	45·5	9·1	6·5				..	67·0	,,	,,
	57. 30	Shade	47·1	49·8	2·7	5·9				..	67·0	,,	,,
	1. 59. 0	Sun	50·8	58·8	8·0	5·5	6·1	1. 58. 0	34	..	66·8	,,	,,
											66·3		
	2. 0. 30	Shade	60·3	62·5	2·2	6·0				..	..	,,	,,
	2. 2. 0	Sun	64·0	72·4	8·4					64·0	67·1	,,	N
											67·2		
Sept. 14	21. 57. 0	Sun	6·6	55·0	48·4					56·0	72·5	No clouds about the Sun.	N
											76·0		
	21. 58. 30	Shade	60·2	64·9	4·7	41·7				..	..	,,	,,
	22. 0. 0	Sun	8·4	52·8	44·4	39·2	40·5	21. 59. 0	34	..	78·2	Cirrus, cirro-cumulus, and cirro-stratus in many directions.	,,
													,,
	1. 30	Shade	59·2	65·0	5·8	27·0				..	80·1	Light clouds passing over the Sun.	,,
	3. 0	Sun	7·0	28·2	21·2	15·4				..	77·7	Cirro-cumulus passing over the Sun.	,,
							24·4	22. 3. 30			71·4		,,
	4. 30	Shade	32·8	38·6	5·8	30·7				..	..	,,	,,
	6. 0	Sun	41·4	93·2	51·8	45·1				..	72·4	Sun free from cloud.	,,
											74·4		
	7. 30	Shade	5·0	12·6	7·6	43·0	43·3	22. 8. 0		..	..	,,	,,
	9. 0	Sun	14·7	64·0	49·3	41·8				..	75·6	Light cirrus over the Sun.	,,
											78·8		
	10. 30	Shade	70·4	77·8	7·4	37·1				..	..	,,	,,
	12. 0	Sun	10·0	49·6	39·6	32·3	34·7	22. 12. 30	35	..	..	,,	,,
											73·7		
	22. 13. 30	Shade	56·7	63·9	7·2					..	75·5	Sun partially covered with light clouds.	N
Sept. 15	2. 41. 0	Sun	10·5	36·0	25·5					64·3	65·0	Sun shining through thin clouds.	N
	42. 30	Shade	38·0	40·0	2·0	18·0				..	67·2	,,	,,
	44. 0	Sun	40·5	55·0	14·5	12·9				..	67·9	Clouds denser; strong breeze.	,,
	45. 30	Shade	57·3	58·5	1·2	13·9	14·3	2. 46. 0	29	..	66·2	Cirro-stratus clouds.	,,
	47. 0	Sun	58·5	74·2	15·7	14·4				..	65·5	,,	,,
	48. 30	Shade	76·0	77·4	1·4	13·5				..	65·8	,,	,,
	2. 50. 0	Sun	79·0	93·0	14·0	..	..	..	..	65·5	65·5		N
											65·1		

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	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Sept. 22	22. 31. 0	Sun	10·5	57·7	47·2	..	..	..	..	58·0	68·6 71·1	Sun free from cloud 53 secs.; obscured 7 secs.	N
	32. 30	Shade	58·8	60·8	2·0	26·3							"
	34. 0	Sun	13·5	22·9	9·4	6·9	9·0	23. 35. 15	37	..	68·6	Sun totally obscured by dense clouds.	"
	35. 30	Shade	24·5	27·6	3·1	11·2				..	63·8	"	"
	37. 0	Sun	29·2	48·5	19·3	16·2				..	65·0	Sun shining through thin clouds for 20 secs.; totally obscured 40 secs.	"
	38. 30	Shade	51·0	54·0	3·0	18·4	18·6	23. 40. 30	37	..	63·0		"
	40. 0	Sun	55·0	78·5	23·5	20·3				..	65·5 65·5	Sun free from cloud 5 secs., partially seen 15 secs., and totally obscured 40 secs.	"
	41. 30	Shade	80·5	84·0	3·5	19·3				.	..		"
	22. 43. 0	Sun	13·6	36·0	22·4	..	..	..	..	61·0	64·4	Sun shining through thin clouds 25 secs.; totally obscured 35 secs.	N
Oct. 4	1. 35. 0	Sun	4·4	46·2	41·8	..	..	..	..	59·0	62·5	Cloudless about the Sun.	N
	36. 30	Shade	49·8	51·3	1·5	40·3	40·4	1. 37. 0	29	..	62·8	Strong East wind.	"
	38. 0	Sun	52·0	93·8	41·8	40·5				..	66·0	"	"
	39. 30	Shade	9·0	10·0	1·0	38·4				..	..	"	"
	41. 0	Sun	10·0	47·0	37·0	35·8	37·1	1. 41. 30	..	..	70·9	"	"
	42. 30	Shade	50·3	51·8	1·5	37·2				..	..	"	"
	44. 0	Sun	52·1	92·4	40·3	39·3	39·8	1. 46. 0	28	..	75·2	"	"
	45. 30	Shade	33·3	33·7	0·4	40·3				..	66·4	"	"
	1. 47. 0	Sun	33·8	74·9	41·1	..	..	..	..	60·0	65·7	"	N
Oct. 6	0. 38. 0	Sun	9·4	48·9	39·5	..	..	..	..	56·0	71·0	Cloudless; strong East wind.	N
	39. 30	Shade	53·7	58·2	4·5	34·0				..	70·5	"	"
	41. 0	Sun	5·2	42·7	37·5	33·0	34·2	0. 40. 45	32	..	70·0	"	"
	42. 30	Shade	46·9	51·4	4·5	35·6				..	71·1	"	"
	44. 0	Sun	53·6	96·3	42·7	37·9				..	72·2	"	"
	45. 30	Shade	6·4	11·6	5·2	38·3	38·4	0. 46. 0	..	..	72·2	"	"
	47. 0	Sun	14·2	58·4	44·2	38·9				..	72·1	"	"
	48. 30	Shade	63·7	69·0	5·3	39·5				..	72·4	"	"
	50. 0	Sun	5·8	51·2	45·4	40·1	40·3	0. 51. 15	31	..	72·1	"	"
	51. 30	Shade	56·5	61·8	5·3	41·2				..	71·2	"	"
	0. 53. 0	Sun	10·4	58·0	47·6	..	..	..	..	62·0	72·0 71·0	"	N
Oct. 18	22. 6. 0	Sun	13·8	52·7	38·9	..	..	..	..	58·0	75·4 76·3	Clear about the Sun; light cirrus clouds elsewhere; strong breeze.	N
	7. 30	Shade	57·7	63·5	5·8	34·8				..	..	"	"
	9. 0	Sun	6·7	49·0	42·3	36·5				..	75·4	"	"
	10. 30	Shade	55·0	60·8	5·8	37·1	36·4	22. 10. 15	24	..	76·0	"	"
	12. 0	Sun	7·4	50·9	43·5	36·6				..	76·7 74·3	"	"
	13. 30	Shade	57·8	65·8	8·0	36·9				..	..	"	"
	15. 0	Sun	4·0	50·3	46·3	38·1				..	75·8	"	"
	16. 30	Shade	57·1	65·4	8·3	38·1				..	72·0	"	"
	18. 0	Sun	3·6	50·0	46·4	38·3	38·1	22. 18. 30	24	..	76·7 74·4	"	"
	19. 30	Shade	62·5	70·3	7·8	38·0				..	..	"	"
	22. 21. 0	Sun	10·8	56·1	45·3	..	..	..	..	62·0	75·0 75·8	"	N

In every Observation, whether in the Sun's rays or in the shade, the terminal reading was taken exactly one minute after the initial reading.
The "Apparent Effect of the Sun's Radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.
The Initial N is that of Mr. W. C. Nash.

OBSERVATIONS WITH THE ACTINOMETER—*concluded.*

Day, 1864.	Greenwich Mean Solar Time of the Initial Reading.	Instrument exposed to the Sun's Rays, or in the Shade.	Readings of the Graduated Scale. Initial A.	Terminal B.	Change in One Minute, B−A.	Apparent effect of the Sun's Radiation in parts of the Scale.	Mean result of each Group in parts of the Scale.	Greenwich Mean Solar Time corresponding to the Mean of each Group.	Altitude of the Sun.	Thermometer in the fluid of the Actinometer.	Blackened Bulb Thermometer on Grass.	General Remarks.	Observer.
	h m s		div.	div.	div.	div.	div.	h m s	°	°	°		
Oct. 24	2. 39. 0	Sun	4·2	36·1	31·9					61·0	67·0	Cloudless about the Sun.	N
	40. 30	Shade	39·8	44·0	4·2	27·6				..	67·9	,,	,,
	42. 0	Sun	45·8	77·5	31·7	27·5	27. 55	2. 41. 0	16	..	67·9	,,	,,
	43. 30	Shade	80·5	84·7	4·2	25·8				..	67·1	,,	,,
	45. 0	Sun	5·6	33·8	28·2	24·6	25. 5	2. 46. 15	16	..	66·0	,,	,,
	46. 30	Shade	36·5	39·5	3·0	26·2				..	65·5	,,	,,
	2. 48. 0	Sun	40·4	70·6	30·2					63·5	66·2	,,	N
Nov. 7	2. 39. 0	Sun	19·5	27·8	8·3					42·5	45·7	Sun shining through thin clouds.	N
	40. 30	Shade	28·9	29·9	1·0	7·9				..	..	,,	,,
	42. 0	Sun	30·0	39·5	9·5	8·4				..	45·8	,,	,,
	43. 30	Shade	41·0	42·2	1·2	7·7	7. 8	2. 44. 0	13	..	..	,,	,,
	45. 0	Sun	43·0	51·3	8·3	7·1				..	46·0	,,	,,
	46. 30	Shade	52·7	53·9	1·2	7·9				..	..	,,	,,
	2. 48. 0	Sun	54·2	64·0	9·8					43·0	46·0	,,	N
Nov. 9	1. 14. 0	Sun	18·9	46·0	27·1					48·7	54·8	Clear about the Sun for 50 secs.	N
	15. 30	Shade	49·5	53·2	3·7	19·6				..	58·2	Partially cloudy 10 secs.	,,
	17. 0	Sun	54·9	74·4	19·5	16·0				..	..		,,
	18. 30	Shade	77·4	80·8	3·4	20·9	19. 1	1. 18. 15	18	..	55·5	Sun shining through thin clouds.	,,
	20. 0	uu	3·9	33·0	29·1	25·4				..	55·5		,,
	21. 30	Shade	37·0	41·0	4·0	13·7				..	..	Denser clouds.	,,
	23. 0	Sun	42·8	49·0	6·2	2·7				..	54·2	Sun free from cloud.	,,
	24. 30	Shade	50·0	53·0	3·0	2·6				..	57·2		,,
	26. 0	Sun	54·0	59·0	5·0	2·5	2. 7	1. 26. 30	18	..	50·6		,,
	27. 30	Shade	60·1	62·0	1·9	3·0				..	48·2	Very dense cumulo-stratus before the Sun.	,,
	1. 29. 0	Sun	62·8	67·7	4·9					51·5	46·9	,,	N
Nov. 21	2. 36. 0	Sun	4·6	11·0	6·4					56·0	51·2	Sun shining through cirro-stratus clouds.	N
	37. 30	Shade	12·8	15·8	3·0	2·9				..	..		,,
	39. 0	Sun	16·4	21·8	5·4	2·9				..	47·6	,,	,,
	40. 30	Shade	23·0	25·0	2·0	2·4	2. 4	2. 41. 0	9	..	47·2		,,
	42. 0	Sun	25·5	28·8	3·3	2·1				..	..	,,	,,
	43. 30	Shade	29·1	29·5	0·4	1·9				..	46·8	Clouds denser.	,,
	2. 45. 0	Sun	29·5	30·8	1·3					56·0	..	,,	,,
Dec. 1	3. 23. 0	Sun	18·8	22·2	+3·4					..	46·1	,,	N
	24. 30	Shade	22·0	21·1	−0·9	3·2				..	50·7	Cloudless but hazy near the Sun.	N
	26. 0	Sun	20·6	21·8	+1·2	2·5	2. 5	3. 26. 30	3	..	48·2		,,
	27. 30	Shade	21·3	19·6	−1·7	1·8				..	..	,,	,,
	3. 29. 0	Sun	16·8	15·8	−1·0					55·6	46·3	,,	,,
Dec. 5	2. 42. 0	Sun	10·9	24·8	13·9					..	45·3	,,	,,
	43. 30	Shade	25·9	27·2	1·3	11·3				56·0	44·8	Sun in cirro-stratus clouds.	N
	45. 0	Sun	28·0	39·2	11·2	10·6				..	44·8		,,
	46. 30	Shade	40·1	39·9	−0·2	11·9	11. 8	2. 47. 0	7	..	53·5	Cloudless.	N
	48. 0	Sun	39·9	52·2	12·3	12·6				..	53·8	,,	,,
	49. 30	Shade	52·8	52·3	−0·5	12·5				..	53·5	,,	,,
	2. 51. 0	Sun	51·9	63·5	11·6					..	53·1	,,	,,
										57·0	..	,,	,,
										..	52·8	,,	N
											52·9		

In every observation, whether in the Sun's rays or in the shade, the terminal reading was taken exactly one minute after the initial reading.
The "Apparent Effect of the Sun's radiation" is found by comparing each change (whether in the Sun's rays or in the shade) with the mean of that which immediately precedes and that which immediately follows it.
The initial N is that of Mr. W. C. Nash.
December 1. The observations on this day, were made for comparison with Mr. Glaisher's results obtained during his balloon ascent from Woolwich.
1864, December 8 to 1865, January 30. The Actinometer was in the hands of its maker for repair.

READINGS OF THERMOMETERS SUNK IN THE GROUND.

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day, except Sundays, and Good Friday.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	51·70	51·18	50·42	49·55	*S*	48·54	48·81	49·47	50·32	51·24	51·82	51·99
2	51·68	51·18	50·37	49·53	48·85	48·54	48·83	49·50	50·33	*S*	51·84	51·98
3	*S*	51·14	50·35	*S*	48·83	48·55	*S*	49·52	50·38	51·29	51·85	52·00
4	51·65	51·10	50·36	49·50	48·78	48·57	48·87	49·55	*S*	51·30	51·82	*S*
5	51·64	51·07	50·32	49·43	48·77	*S*	48·89	49·59	50·44	51·34	51·86	52·00
6	51·58	51·04	*S*	49·40	48·78	48·57	48·88	49·60	50·47	51·38	*S*	52·00
7	51·58	*S*	50·27	49·39	48·77	48·58	48·92	*S*	50·52	51·41	51·82	51·98
8	51·58	51·00	50·24	49·37	*S*	48·58	48·92	49·66	50·55	51·44	51·86	51·97
9	51·60	50·93	50·18	49·35	48·70	48·58	48·85	49·66	50·58	*S*	51·89	51·97
10	*S*	50·93	50·16	*S*	48·71	48·58	*S*	49·68	50·58	51·48	51·89	51·95
11	51·58	50·92	50·16	49·30	48·70	48·57	49·01	49·73	*S*	51·49	51·88	*S*
12	51·57	50·91	50·12	49·28	48·69	*S*	49·02	49·76	50·64	51·52	51·89	51·96
13	51·53	50·89	*S*	49·25	48·68	48·58	49·04	49·78	50·67	51·52	*S*	51·93
14	51·52	*S*	50·08	49·23	48·68	48·60	49·06	*S*	50·72	51·54	51·94	51·90
15	51·48	50·83	50·04	49·21	*S*	48·60	49·09	49·84	50·73	51·57	51·94	51·88
16	51·47	50·80	50·02	49·16	48·66	48·63	49·09	49·85	50·75	*S*	51·93	51·77
17	*S*	50·76	49·97	*S*	48·65	48·64	*S*	49·89	50·78	51·62	51·95	51·83
18	51·46	50·73	49·94	49·14	48·65	48·64	49·17	49·92	*S*	51·63	51·96	*S*
19	51·46	50·67	49·94	49·13	48·64	*S*	49·17	49·94	50·87	51·67	51·99	51·84
20	51·44	50·75	*S*	49·12	48·63	48·68	49·21	49·96	50·88	51·67	*S*	51·86
21	51·42	*S*	49·87	49·08	48·59	48·69	49·22	*S*	50·92	51·68	51·97	51·83
22	51·41	50·62	49·84	49·06	*S*	48·69	49·24	50·02	50·97	51·70	51·98	51·81
23	51·38	50·68	49·81	49·04	48·58	48·69	49·26	50·00	50·98	*S*	51·98	51·78
24	*S*	50·56	49·78	*S*	48·58	48·72	*S*	50·07	51·04	51·73	51·96	51·78
25	51·34	50·52	GoodFriday.	48·98	48·58	48·72	49·30	50·09	*S*	51·74	51·97	*S*
26	51·33	50·52	49·71	48·96	48·57	*S*	49·32	50·13	51·08	51·75	51·97	51·75
27	51·32	50·48	*S*	48·94	48·57	48·74	49·36	50·17	51·13	51·76	*S*	51·73
28	51·28	*S*	49·65	48·90	48·55	48·76	49·38	*S*	51·16	51·80	52·02	51·73
29	51·23	50·44	49·63	48·90	*S*	48·79	49·42	50·24	51·18	51·79	52·00	51·73
30	51·22		49·58	48·87	48·54	48·80	49·44	50·27	51·20	*S*	52·00	51·71
31	*S*		49·58		48·54		*S*	50·28		51·81		51·68
Means.	51·48	50·83	50·02	49·19	48·66	48·64	49·11	49·86	50·76	51·57	51·92	51·86

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·65	48·19	46·71	45·86	*S*	48·65	50·95	53·13	55·01	55·26	54·35	52·28
2	50·55	48·17	46·65	45·86	46·50	48·72	51·06	53·19	55·01	*S*	54·35	52·20
3	*S*	48·11	46·60	*S*	46·54	48·84	*S*	53·27	55·05	55·22	54·31	52·14
4	50·45	48·05	46·58	45·87	46·57	48·95	51·19	53·39	*S*	55·18	54·20	*S*
5	50·38	48·00	46·48	45·81	46·67	*S*	51·28	53·50	55·05	55·18	54·23	52·01
6	50·25	47·95	*S*	45·84	46·75	49·09	51·30	53·55	55·08	55·23	*S*	51·92
7	50·20	*S*	46·40	45·82	46·80	49·20	51·40	*S*	55·13	55·26	54·15	51·84
8	50·15	47·87	46·34	45·82	*S*	49·24	51·44	53·68	55·14	55·19	54·05	51·74
9	50·12	47·78	46·22	45·78	46·88	49·33	51·52	53·71	55·15	*S*	54·04	51·68
10	*S*	47·70	46·18	*S*	46·98	49·38	*S*	53·76	55·12	55·15	54·00	51·57
11	50·00	47·75	46·16	45·78	47·05	49·41	51·72	53·88	*S*	55·10	53·88	*S*
12	49·92	47·70	46·12	45·80	47·14	*S*	51·73	53·97	55·11	55·09	53·82	51·47

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet)—*concluded.*

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	49·78	47·70	*S*	45·79	47·19	49·54	51·79	54·07	55·14	55·06	*S*	51·38
14	49·67	*S*	46·06	45·81	47·27	49·62	51·87	*S*	55·17	55·02	53·75	51·26
15	49·57	47·55	46·04	45·83	*S*	49·67	51·95	54·23	55·15	54·99	53·66	51·20
16	49·50	47·50	46·02	45·80	47·39	49·77	51·97	54·22	55·16	*S*	53·57	51·14
17	*S*	47·43	46·00	*S*	47·46	49·87	*S*	54·30	55·17	54·97	53·49	51·02
18	49·32	47·34	45·97	45·86	47·54	49·92	52·15	54·38	*S*	54·92	53·40	*S*
19	49·23	47·27	45·96	45·90	47·60	*S*	52·25	54·43	55·23	54·92	53·35	50·92
20	49·13	47·23	*S*	45·95	47·67	50·10	52·32	54·47	55·26	54·85	*S*	50·90
21	49·02	*S*	45·94	45·95	47·67	50·19	52·32	*S*	55·25	54·80	53·14	50·82
22	48·93	47·12	45·93	45·99	*S*	50·25	52·37	54·58	55·29	54·77	53·05	50·72
23	48·82	47·07	45·90	46·00	47·84	50·30	52·43	54·56	55·27	*S*	52·95	50·64
24	*S*	47·01	45·93	*S*	47·89	50·40	*S*	54·68	55·32	54·70	52·75	50·60
25	48·64	46·95	Good Friday.	46·10	48·00	50·47	52·55	54·70	*S*	54·66	52·72	*S*
26	48·55	46·94	45·87	46·14	48·08	*S*	52·63	54·75	55·25	54·61	52·64	50·42
27	48·52	46·90	*S*	46·20	48·18	50·73	52·75	54·87	55·32	54·56	*S*	50·35
28	48·40	*S*	45·88	46·22	48·28	50·72	52·80	*S*	55·33	54·59	52·55	50·27
29	48·32	46·77	45·85	46·30	*S*	50·83	52·82	54·96	55·27	54·50	52·47	50·21
30	48·26		45·85	46·38	48·44	50·88	52·98	55·04	55·25	*S*	52·37	50·12
31	*S*		45·87		48·54		*S*	54·99		54·40		50·02
Means.	49·47	47·52	46·13	45·94	47·42	49·77	51·98	54·16	55·18	54·93	53·51	51·14

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·60	45·97	43·80	44·80	*S*	52·48	55·38	58·38	58·40	57·53	54·77	50·01
2	48·49	45·93	43·85	44·79	48·50	52·50	55·43	58·41	58·38	*S*	54·71	49·94
3	*S*	45·78	43·80	*S*	48·58	52·51	*S*	58·53	58·41	57·37	54·59	49·84
4	48·30	45·70		44·80	48·64	52·57	55·51	58·69	*S*	57·26	54·36	*S*
5	48·08	45·62		44·79	48·80	*S*	55·60	58·80	58·39	57·20	54·25	49·63
6	47·85	45·62	*S*	44·86	48·99	52·58	55·59	58·78	58·40	57·12	*S*	49·57
7	47·62	*S*	43·95	44·93	49·09	52·69	55·68	*S*	58·45	56·97	53·84	49·50
8	47·39	45·50	44·00	45·03	*S*	52·75	55·68	58·91	58·46	56·80	53·54	49·41
9	47·15	45·38	44·08	45·09	49·22	52·89	55·74	58·96	58·45	*S*	53·31	49·42
10	*S*	45·29	44·03	*S*	49·40	53·03	*S*	59·06	58·40	56·50	53·10	49·38
11	46·63	45·15	44·20	45·27	49·50	53·16	55·91	59·20	*S*	56·36	52·82	*S*
12	46·42	44·98	44·22	45·43	49·59	*S*	55·90	59·29	58·48	56·25	52·37	49·33
13	46·18	44·84	*S*	45·58	49·67	53·48	55·95	59·35	58·53	56·16	*S*	49·25
14	45·97	*S*	44·30	45·77	49·74	53·67	56·08	*S*	58·52	56·07	52·09	49·16
15	45·80	44·59	44·30	45·94	*S*	53·80	56·22	59·29	58·41	55·98	51·84	49·10
16	45·71	44·56	44·37	46·06	49·98	53·96	56·30	59·20	58·35	*S*	51·68	49·01
17	*S*	44·60	44·60	*S*	50·14	54·09	*S*	59·25	58·27	55·85	51·53	48·90
18	45·55	44·63	44·53	46·33	50·32	54·16	56·63	59·28	*S*	55·72	51·41	*S*
19	45·49	44·63	44·52	46·50	50·35	*S*	56·76	59·30	58·20	55·67	51·30	48·63
20	45·42	44·73	*S*	46·63	50·80	54·40	56·94	59·32	58·11	55·52	*S*	48·48
21	45·37	*S*	44·69	46·80	51·00	54·52	57·05	*S*	58·02	55·50	51·14	48·25
22	45·40	44·60	44·70	46·95	*S*	54·60	57·20	59·33	57·98	55·44	51·10	48·02
23	45·42	44·50	44·72	47·14	51·59	54·73	57·34	59·20	57·84	*S*	51·00	47·84
24	*S*	44·39	44·79	*S*	51·81	54·89	*S*	59·25	57·85	55·38	50·59	47·72
25	45·65	44·25	Good Friday.	47·50	52·03	55·00	57·62	59·14	*S*	55·30	50·61	*S*
26	45·79	44·18	44·83	47·58	52·14	*S*	57·78	59·08	57·69	55·20	50·59	47·39

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet)—*concluded.*

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
27	45·90	44·05	*S*	47·86	52·25	55·08	57·95	58·99	57·72	55·10	*S*	47·25
28	45·90	*S*	44·85	48·00	52·33	55·27	58·03	*S*	57·70	55·08	50·39	47·06
29	45·93	43·90	44·85	48·17	*S*	55·34	58·16	58·70	57·60	54·92	50·28	46·90
30	45·93		44·80	48·29	52·40	55·36	58·24	58·60	57·54	*S*	50·11	46·75
31	*S*		44·84		52·48		*S*	58·47		54·81		46·60
Means .	46·46	44·93	44·40	46·19	50·36	53·83	56·56	58·99	58·18	56·04	52·20	48·61

At temperatures below 43°·50 the fluid of this thermometer descends below the scale ; the readings on March 4 and 5 were both less than 43°·50, and the readings for two or three preceding days were subject to some uncertainty.

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at the same times.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	45·03	42·52	40·20	42·34	*S*	53·54	57·47	61·75	59·48	57·31	52·90	46·30
2	44·68	42·16	40·42	42·65	49·40	53·46	57·56	61·85	59·46	*S*	52·48	46·19
3	*S*	42·10	40·60	*S*	49·69	53·49	*S*	61·80	59·41	56·90	52·00	45·80
4	43·33	42·53	40·70	42·87	49·92	53·63	57·67	61·70	*S*	56·51	51·48	*S*
5	42·95	42·49	41·10	43·24	50·01	*S*	57·63	61·70	59·30	56·10	51·00	45·93
6	42·35	42·18	*S*	43·59	50·04	54·00	57·65	61·88	59·37	55·79	*S*	46·11
7	41·85	*S*	41·83	43·59	50·10	54·50	57·79	*S*	59·37	55·40	49·91	46·26
8	41·31	41·40	42·36	43·80	*S*	54·99	57·75	62·44	59·60	55·24	49·55	46·33
9	40·90	41·07	42·44	44·06	50·57	55·39	57·70	62·53	59·87	*S*	48·90	46·47
10	*S*	40·67	42·33	*S*	50·49	55·80	*S*	62·58	60·09	55·03	48·55	46·28
11	40·47	40·32	42·05	44·94	50·30	56·04	57·85	62·25	*S*	54·92	48·05	*S*
12	40·37	40·03	42·02	45·40	50·43	*S*	58·12	61·80	59·70	54·87	47·58	45·98
13	40·37	40·10	*S*	45·87	50·62	56·41	58·57	61·51	59·20	54·78	*S*	46·00
14	40·55	*S*	42·10	45·94	51·03	56·61	58·89	*S*	58·90	54·68	47·31	45·78
15	40·67	41·02	42·42	46·02	*S*	56·50	59·14	61·54	58·72	54·57	47·53	45·80
16	40·73	41·48	42·63	46·12	51·99	56·53	59·30	61·60	58·60	*S*	47·59	45·84
17	*S*	41·93	42·93	*S*	52·55	56·51	*S*	61·82	58·50	54·15	47·63	44·92
18	40·75	41·95	42·81	46·77	53·11	56·70	60·04	61·89	*S*	54·11	47·64	*S*
19	40·99	41·70	42·63	46·99	53·75	*S*	60·23	61·77	58·14	54·24	47·54	45·92
20	41·36	41·40	*S*	47·28	54·45	57·25	60·53	61·55	57·90	54·31	*S*	45·21
21	41·80	*S*	42·69	47·70	54·79	57·48	60·78	*S*	57·69	54·52	47·35	43·10
22	42·30	40·40	42·83	48·19	*S*	57·74	61·05	61·11	57·72	54·52	48·00	43·23
23	42·76	40·15	42·89	48·48	55·09	57·84	61·20	60·59	57·77	*S*	48·07	43·34
24	*S*	39·90	42·92	*S*	54·98	57·89	*S*	60·27	57·80	54·11	47·40	42·89
25	43·57	39·50	Good Friday	48·92	54·74	57·70	61·35	59·89	*S*	53·85	47·15	*S*
26	43·37	39·40	42·80	49·07	54·45	*S*	61·41	59·19	57·74	53·50	46·70	42·05
27	43·23	39·45	*S*	49·07	54·28	57·70	61·44	58·85	57·80	53·48	*S*	41·85
28	43·23	*S*	42·75	49·10	54·20	57·58	61·32	*S*	57·79	53·37	46·20	41·62
29	43·40	39·87	42·67	49·17	*S*	57·46	61·38	58·60	57·59	53·53	46·45	41·53
30	43·37		42·50	49·15	54·05	57·39	61·48	58·87	57·59	*S*	46·47	41·74
31	*S*		42·39		53·81		*S*	59·08		53·38		41·91
Means .	42·14	41·03	42·15	46·17	52·26	56·16	59·43	61·12	58·26	54·75	48·55	44·91

At temperatures below 39°·70 the fluid of this thermometer descends below the scale ; the readings on February 25, 26, and 27, which are slightly below this value, are estimated readings only, and therefore liable to some uncertainty.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the case which covers the tops of the deep-sunk Thermometers, at the same times.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	39·4	40·3	41·4	44·3	*S*	54·2	59·3	65·9	60·5	57·2	48·9	43·8
2	36·9	43·7	38·8	43·5	55·3	55·0	61·2	63·0	61·2	*S*	48·4	41·8
3	*S*	45·7	40·5	*S*	54·9	55·9	*S*	61·5	61·3	54·7	47·7	46·2
4	34·4	40·4	45·0	49·0	51·6	56·5	59·3	65·4	*S*	52·4	43·0	*S*
5	35·2	38·0	43·8	44·0	51·8	*S*	60·1	68·0	60·0	53·5	45·8	47·1
6	30·4	38·0	*S*	45·2	53·5	59·2	59·4	67·8	60·0	53·0	*S*	48·2
7	30·0	*S*	46·3	45·6	55·0	61·5	60·2	*S*	63·9	54·6	44·5	47·3
8	33·0	36·4	46·2	45·5	*S*	61·6	58·2	68·3	65·6	53·5	41·3	46·8
9	35·3	34·0	41·2	47·3	50·2	61·9	58·4	64·6	65·3	*S*	43·7	44·6
10	*S*	33·3	40·2	*S*	53·0	60·8	*S*	60·8	61·4	54·8	41·6	44·2
11	38·3	35·8	44·4	51·1	52·3	61·0	64·8	60·7	*S*	55·7	40·3	*S*
12	38·9	40·3	42·9	50·5	56·3	*S*	62·2	62·0	56·2	54·2	41·9	46·8
13	38·6	45·8	*S*	48·4	56·4	60·3	62·2	63·2	57·7	54·0	*S*	44·0
14	39·2	*S*	46·2	48·8	56·6	60·6	61·5	*S*	60·5	53·1	48·0	43·4
15	37·2	44·2	46·8	50·5	*S*	59·1	64·0	65·2	58·1	51·4	45·3	40·6
16	39·0	45·8	44·3	50·3	60·6	59·3	63·4	64·1	59·3	*S*	46·2	39·3
17	*S*	41·3	42·5	*S*	60·8	61·5	*S*	64·9	57·1	54·9	46·4	35·6
18	40·6	39·0	43·0	51·0	62·3	61·3	66·5	61·5	*S*	55·0	49·3	*S*
19	43·1	36·4	44·0	53·8	63·7	*S*	67·0	61·2	57·2	57·2	48·7	36·4
20	44·7	35·5	*S*	56·7	63·9	62·5	67·4	61·7	55·8	55·8	*S*	41·3
21	45·2	*S*	43·5	56·0	57·8	63·2	67·0	*S*	58·4	53·5	45·9	41·9
22	47·2	36·0	43·4	54·5	*S*	62·0	65·9	60·0	60·5	54·6	49·3	39·0
23	48·0	35·4	43·1	53·8	59·8	60·7	66·0	56·0	57·8	*S*	45·4	36·7
24	*S*	36·0	41·5	*S*	55·2	60·0	*S*	55·9	60·3	53·4	43·5	36·8
25	42·7	36·9	Good Friday.	52·1	56·9	60·7	63·5	54·8	*S*	52·3	41·3	*S*
26	42·2	38·1	43·5	53·0	55·2	*S*	64·5	56·2	57·8	53·4	42·6	37·1
27	45·6	38·4	*S*	51·8	55·5	58·9	64·8	55·9	59·2	53·9	*S*	36·4
28	44·0	*S*	43·3	49·5	56·3	59·3	65·3	*S*	58·3	54·7	49·7	37·4
29	42·2	41·2	41·9	50·3	*S*	61·8	65·5	62·3	56·5	53·7	45·0	42·4
30	38·3		40·4	52·5	52·8	60·1	66·7	63·2	57·6	*S*	45·7	41·5
31	*S*		44·0		55·3		*S*	65·3		49·1		37·9
Means.	39·6	39·0	43·2	50·0	56·3	60·0	63·2	62·2	59·5	54·0	45·4	41·6

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at the same times.

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	33·7	43·3	45·7	49·6	*S*	60·8	63·9	72·2	57·2	61·8	47·8	47·2
2	30·8	46·4	38·2	47·9	60·4	60·3	66·8	67·0	63·0	*S*	48·2	43·8
3	*S*	47·2	39·2	*S*	56·5	57·3	*S*	64·7	66·2	57·4	52·6	48·8
4	32·5	39·0	50·8	58·5	50·3	67·1	66·5	75·2	*S*	55·0	38·5	*S*
5	31·0	36·7	45·3	40·3	53·5	*S*	68·0	81·0	63·0	58·3	46·9	52·2
6	24·8	34·0	*S*	47·8	64·5	69·4	62·4	71·7	63·0	61·5	*S*	51·5
7	22·9	*S*	49·2	50·6	60·0	73·5	65·3	*S*	67·9	63·2	44·8	48·3
8	30·0	33·6	47·8	51·8	*S*	67·5	58·8	73·3	73·1	61·0	40·0	46·8
9	36·7	30·8	34·8	56·3	47·0	70·8	62·7	65·1	68·1	*S*	48·3	46·6
10	*S*	34·1	43·6	*S*	57·6	67·9	*S*	62·3	61·1	59·4	45·4	45·3
11	44·0	35·9	48·5	58·1	53·0	68·5	76·4	65·5	*S*	55·7	40·0	*S*
12	40·2	46·0	46·5	57·6	65·0	*S*	68·9	71·8	59·6	57·3	41·1	48·5
13	38·3	51·8	*S*	55·7	64·9	62·6	67·0	75·8	61·2	54·8	*S*	44·1
14	38·2	*S*	53·1	57·5	67·8	66·5	68·3	*S*	62·6	54·8	52·8	40·2
15	35·3	48·0	50·7	63·2	*S*	63·6	75·3	73·9	60·1	55·8	48·8	34·8

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers—*concluded.*

Days of the Month, 1864.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	37·7	47·7	47·8	51·2	70·5	68·3	70·9	67·8	60·6	*S*	44·8	33·7
17	*S*	42·0	45·8	*S*	73·5	68·4	*S*	71·5	57·5	59·6	47·7	28·7
18	42·0	38·8	48·2	51·3	77·2	66·2	75·6	67·9	*S*	59·7	52·5	*S*
19	45·9	34·2	54·2	64·1	75·3	*S*	76·2	69·0	60·7	64·6	53·8	38·0
20	45·8	31·5	*S*	71·1	75·8	70·5	78·5	66·4	62·8	59·4	*S*	45·0
21	45·7	*S*	44·8	68·2	54·8	69·5	75·5	*S*	64·8	56·2	47·6	39·7
22	51·1	36·8	44·3	63·9	*S*	66·2	71·8	59·0	65·5	57·7	51·2	34·6
23	48·6	34·0	48·8	65·6	62·5	62·2	72·2	52·2	61·8	*S*	46·0	32·5
24	*S*	39·7	47·9	*S*	60·8	63·6	*S*	58·5	65·7	60·2	40·2	32·8
25	40·9	37·0	Good Friday.	60·3	63·2	63·8	65·1	58·3	*S*	56·6	43·0	*S*
26	44·7	37·8	44·9	57·5	57·5	*S*	68·2	61·8	61·7	55·1	44·3	34·6
27	49·5	38·0	*S*	57·5	60·5	62·3	72·4	64·0	70·0	54·7	*S*	32·7
28	46·4	*S*	45·6	48·0	60·5	64·9	71·0	*S*	67·9	60·4	53·8	39·3
29	42·8	42·0	43·0	55·3	*S*	68·9	73·5	72·5	60·6	53·7	47·8	41·0
30	36·8		39·3	56·0	56·5	63·6	74·2	75·0	60·9	*S*	47·9	39·5
31	*S*		51·7		62·0		*S*	68·4		49·9		36·3
Means.	39·1	39·5	46·1	56·3	62·0	65·9	69·8	67·8	63·3	57·8	46·8	41·0

Weekly Means of Readings of Thermometers.

1864. Period.	Thermometers sunk in the ground. Bulb 24 French Feet deep.	Bulb 12 French Feet deep.	Bulb 6 French Feet deep.	Bulb 3 French Feet deep.	Bulb 1 Inch deep.	Thermometer inclosed in the box which covers the scales of the deep-sunk Thermometers, and placed on a level with their scales.
d d	°	°	°	°	°	°
January 1 to January 7	51·64	50·41	48·16	43·36	34·4	29·3
8 to 14	51·66	49·94	46·62	40·66	37·2	37·9
15 to 21	51·45	49·29	45·56	41·05	41·6	42·1
22 to 28	51·34	48·64	45·68	43·08	44·9	46·9
29 to February 4	51·18	48·18	45·87	42·68	41·8	42·6
February 5 to 11	50·98	47·84	45·43	41·35	35·9	34·2
12 to 18	50·82	47·54	44·70	41·08	42·7	45·7
19 to 25	50·63	47·11	44·52	40·51	36·0	35·5
26 to March 3	50·43	46·76	43·93	39·99	39·7	40·1
March 4 to 10	50·25	46·37	44·01	41·79	43·8	45·3
11 to 17	50·06	46·07	44·33	42·36	44·5	48·7
18 to 24	49·86	45·94	44·66	42·79	43·1	48·0
25 to 31	49·63	45·86	44·83	42·62	42·6	44·9
April 1 to April 7	49·47	45·84	44·83	43·05	45·3	49·1
8 to 14	49·30	45·80	45·36	45·00	48·6	56·2
15 to 21	49·14	45·88	46·38	46·81	53·0	61·5
22 to 28	48·98	46·11	47·50	48·81	52·4	58·8
29 to May 5	48·83	46·44	48·50	49·56	52·7	55·3
May 6 to 12	48·72	46·93	49·30	50·32	53·4	57·8
13 to 19	48·66	47·41	50·03	52·17	60·1	71·5
20 to 26	48·59	47·86	51·56	54·75	58·1	62·4
27 to June 2	48·55	48·47	52·41	53·89	54·8	60·1
June 3 to 9	48·57	49·11	52·66	54·33	59·4	67·6
10 to 16	48·59	49·56	53·52	56·31	60·2	66·2
17 to 23	48·67	50·10	54·42	57·25	61·9	67·2
24 to 30	48·75	50·67	55·16	57·62	60·1	64·5
July 1 to July 7	48·87	51·20	55·53	57·63	59·9	65·5
8 to 14	48·98	51·68	55·88	58·15	61·2	67·0
15 to 21	49·16	52·16	56·65	60·00	65·9	75·3
22 to 28	49·31	52·59	57·65	61·29	65·0	70·1
29 to August 4	49·48	53·13	58·40	61·66	64·7	71·1
August 5 to 11	49·65	53·68	58·95	62·23	65·0	69·8
12 to 18	49·84	54·19	59·28	61·69	63·5	71·4
19 to 25	50·01	54·57	59·26	60·83	58·3	60·6
26 to September 1	50·23	54·94	58·71	59·01	60·6	66·5
September 2 to 8	50·45	55·08	58·41	59·42	62·0	66·0
9 to 15	50·65	55·14	58·46	59·41	59·9	62·1
16 to 22	50·86	55·23	58·15	58·09	58·0	62·0
23 to 29	51·09	55·29	57·73	57·75	58·3	64·6
30 to October 6	51·29	55·22	57·34	56·67	54·7	59·1
October 7 to 13	51·48	55·14	56·51	55·04	54·5	58·6
14 to 20	51·62	54·94	55·80	54·34	54·6	59·0
21 to 27	51·73	54·68	55·32	54·00	53·5	56·8
28 to November 3	51·82	54·42	54·81	52·99	50·4	52·1
November 4 to 10	51·86	54·11	53·73	49·86	43·3	44·0
11 to 17	51·92	53·69	52·05	47·61	44·7	45·9
18 to 24	51·97	53·11	51·09	47·85	47·0	48·5
25 to December 1	51·99	52·50	50·33	46·54	44·7	47·3
December 2 to 8	51·99	51·97	49·63	46·11	46·2	48·6
9 to 15	51·93	51·43	49·27	46·03	43·9	43·2
16 to 22	51·82	50·92	48·55	43·89	38·9	36·6
23 to 31	51·74	50·33	47·19	42·08	38·3	38·1

ABSTRACT OF THE CHANGES OF THE DIRECTION OF THE WIND, AS DERIVED FROM OSLER'S ANEMOMETER.

By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c., by *retrograde* is meant in the order N., W., S., E., N., &c.

1863. Dec. 31. 12. The direction of the wind was E.N.E.
1864. Jan. 31. 12. ,, ,, S.S.W., which implies a direct motion of 135°.
On Jan. 14. 3, $29^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying direct motion of 720°.
Therefore the whole excess of direct motion in the month of January was 855°.

1864. Jan. 31. 12. The direction of the wind was S.S.W.
Feb. 29. 12. ,, ,, S., which implies a retrograde motion of $22\frac{1}{2}°$.
On Feb. 10. 22, the trace was shifted to the next set of lines upwards; on Feb. $27^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 360°.
Therefore the whole excess of retrograde motion in the month of February was $22\frac{1}{2}°$.

1864. Feb. 29. 12. The direction of the wind was S.
March 31. 12. ,, ,, W.S.W., which implies a direct motion of $67\frac{1}{2}°$.
On March 15. 22, the trace was shifted to the next set of lines downwards; on March $20^d.\ 0^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 360°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of March was $67\frac{1}{2}°$.

1864. March 31. 12. The direction of the wind was W.S.W.
April 30. 12. ,, ,, S.S.E., which implies a direct motion of 270°.
On April 4. 22, $8^d.\ 22^h$, $10^d.\ 22^h$, $15^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on April $5^d.\ 22^h$, $28^d.\ 3^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1440°, and retrograde motion of 720°.
Therefore the whole excess of direct motion in the month of April was 990°.

1864. April 30. 12. The direction of the wind was S.S.E.
May 31. 12. ,, ,, N.N.E., which implies a retrograde motion of 135°.
On May 0. 22, $3^d.\ 22^h$, $8^d.\ 22^h$, $14^d.\ 2^h$, $15^d.\ 1^h$, $19^d.\ 22^h$, $21^d.\ 22^h$, $24^d.\ 22^h$, $28^d.\ 3^h$, $28^d.\ 22^h$, $29^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on May $9^d.\ 3^h$, $12^d.\ 22^h$, $16^d.\ 22^h$, $27^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 3960°, and retrograde motion of 1440°.
Therefore the whole excess of direct motion in the month of May was 2385°.

1864. May 31. 12. The direction of the wind was N.N.E.
June 30. 12. ,, ,, W.S.W., which implies a retrograde motion of 135°.
On June 2. 3, $4^d.\ 6^h$, $6^d.\ 3^h$, $7^d.\ 22^h$, the trace was shifted to the next set of lines downwards; on June $2^d.\ 22^h$, the trace was shifted to the next set of lines upwards, implying direct motion of 1440°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of June was 945°.

1864. June 30. 12. The direction of the wind was W.S.W.
July 31. 12. ,, ,, S.W., which implies a retrograde motion of $22\frac{1}{2}°$.
On July 1. 3, $8^d.\ 22^h$, $17^d.\ 22^h$, $27^d.\ 22^h$, the trace was shifted to the next set of lines upwards; on July $6^d.\ 22^h$, $14^d.\ 9^h$, $17^d.\ 1\frac{1}{2}^h$, $18^d.\ 22^h$, $19^d.\ 22^h$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 1440°, and direct motion of 1800°.
Therefore the whole excess of direct motion in the month of July was $337\frac{1}{2}°$.

1864. July 31. 12. The direction of the wind was S.W.
Aug. 31. 12. ,, ,, S.W., which implies no change.
On Aug. 3, 8d. 3h, 8d. 22h, 9d. 3h, 11d. 22h, 12d. 22h, 30d. 3h, the trace was shifted to the next set of lines downwards; on Aug. 3d. 22h, 21d. 0h, 23d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 2520°, and retrograde motion of 1080°.
Therefore the whole excess of direct motion in the month of August was 1440°.

1864. Aug. 31. 12. The direction of the wind was S.W.
Sept. 30. 12. ,, ,, N.E., which implies a direct motion of 180°.
On Sept. 4. 22, 26d. 22h, the trace was shifted to the next set of lines upwards; on Sept. 28d. 22h, the trace was shifted to the next set of lines downwards, implying retrograde motion of 720°, and direct motion of 360°.
Therefore the whole excess of retrograde motion in the month of September was 180°.

1864. Sept. 30. 12. The direction of the wind was N.E.
Oct. 31. 12. ,, ,, E.S.E., which implies a direct motion of $67\frac{1}{2}$°.
On Oct. 24. 22, 28d. 22h, the trace was shifted to the next set of lines upwards, implying retrograde motion of 720°.
Therefore the whole excess of retrograde motion in the month of October was $652\frac{1}{2}$°.

1864. Oct. 31. 12. The direction of the wind was E.S.E.
Nov. 30. 12. ,, ,, S.S.W., which implies a retrograde motion of 270°.
On Nov. 6. 22, 7d. 22h, 12d. 22h, the trace was shifted to the next set of lines downwards; on Nov. 7d. 3h, 15d. 9h, 23d. 22h, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 1080°.
Therefore the whole excess of retrograde motion in the month of November was 270°.

1864. Nov. 30. 12. The direction of the wind was S.S.W.
Dec. 31. 12. ,, ,, E.N.E., which implies a direct motion of 225°.
On Dec. 15. 3, the trace was shifted to the next set of lines upwards; on Dec. 18d. 0h, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 360°.
Therefore the whole excess of direct motion in the month of December was 225°.

The whole excess of direct motion to the end of the year was 6120°.

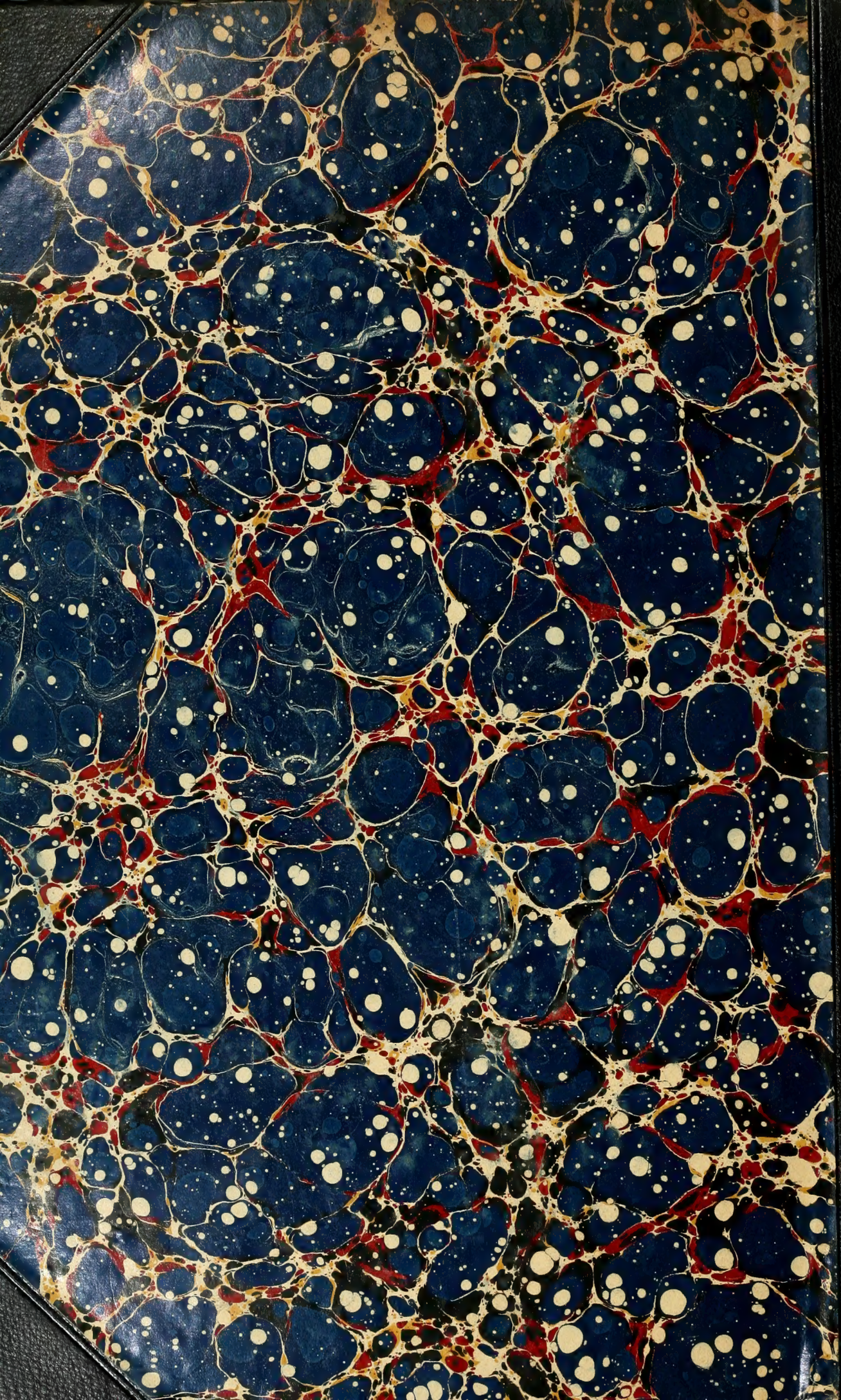
The revolution-counter which is attached to the vertical spindle of the vane, whose readings increase with change of direction of the wind in the order N., E., S., W., &c., or in *direct* motion, and decrease with change of direction in the order N., W., S., E., &c. or in *retrograde* motion, gave the following readings:—

	revs.
On 1863, December 31d. 12h	0·00
On 1864, December 31d. 12h	17·20

Implying an excess of direct motion, during the year, of 17·20 revolutions, or 6192°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1864.

1864, MONTH.	Monthly Amount of Rain collected in each Gauge.							
	Osler's Anemometer Gauge.	Second Gauge at Osler's Anemometer.	On the Roof of the Octagon Room.	On the Roof of the Library.	On the Roof of the Photographic Thermometer Shed.	Crosley's.	Cylinder partly sunk in the Ground read daily.	Cylinder partly sunk in the Ground read Monthly.
	in.	in.	in.	in.	in.	in.	in.	in.
January	0·45	0·51	0·59	0·65	0·81	0·65	0·88	0·93
February	0·30	0·34	0·39	0·58	0·72	0·66	0·76	0·84
March	1·47	1·60	1·97	2·36	2·53	2·37	2·53	2·72
April	0·67	0·64	0·59	0·83	0·83	0·82	0·82	0·70
May	1·31	1·31	1·57	1·87	2·03	1·94	2·00	1·94
June	0·60	0·45	0·62	0·78	0·85	0·87	0·92	0·88
July	0·18	0·12	0·19	0·24	0·31	0·30	0·27	0·30
August	0·70	0·75	0·93	1·15	1·33	1·15	1·31	1·40
September	2·17	2·10	2·26	2·16	2·75	2·25	2·76	2·80
October	0·74	0·72	0·79	0·85	1·04	0·96	1·06	1·13
November	1·57	1·58	1·77	2·01	2·48	2·16	2·57	2·65
December	0·24	0·28	0·30	0·43	0·46	0·48	0·50	0·60
Sums	10·40	10·40	11·97	13·91	16·14	14·61	16·38	16·89

The heights of the receiving surfaces are as follows:

	Above the Mean Level of the Sea. Ft.	In.		Above the Ground. Ft.	In.
The Two Gauges at Osler's Anemometer	205	6	.....	50	8
Gauge on the Roof of the Octagon Room	193	2½	.....	38	4½
Gauge on the Roof of the Library	177	2	.....	22	4
Gauge on the Roof of the Photographic Thermometer Shed	164	10	.....	10	0
Crosley's Gauge	156	6	.....	1	8
The Two Cylinder Gauges partly sunk in the Ground	155	3	.....	0	5